4K92-24

1992

HARVEST STRATEGY

KODIAK AREA COMMERCIAL SALMON FISHERY

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[1]The Regional Information Report Series was established in 1987 to provide an information access system for all unpublished divisional reports. These reports frequently serve diverse ad hoc informational purposes or archive basic uninterpreted data. To accommodate timely reporting of recently collected information, reports in this series undergo only limited internal review and may contain preliminary data; this information may be subsequently finalized and published in the formal literature. Consequently, these reports should not be cited without prior approval of the author or the Division of Commercial Fisheries.

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INTRODUCTION

The 1992 salmon harvest strategy for the Kodiak Management Area (Area K) will, as in the past, emphasize three management criteria:

(1) **To ensure that the 1992 escapement occurs in the proper magnitude and distribution in order that the potential for maximum production for subsequent returns is established.**

- The results of ADF&G's 1992 management activities will directly affect the following future commercially targeted returns:

  - **1994 pink salmon runs**
  - **1995 - 1996 coho salmon runs**
  - **1995 - 1997 chum salmon runs**
  - **1996, 1997, 1998 sockeye and chinook salmon runs**

(2) **To provide an orderly harvest on the highest quality salmon by pursuing an aggressive harvest approach which maximizes harvest opportunities during each fishing period.**

- This has always required a species-oriented approach which:

  - For sockeye and coho salmon emphasizes using inseason weir escapement data on major systems to determine fishing time by geographical area.

    - Fishing time on minor sockeye and coho systems without fish weirs determined by ADF&G's perception of run strength for these systems.

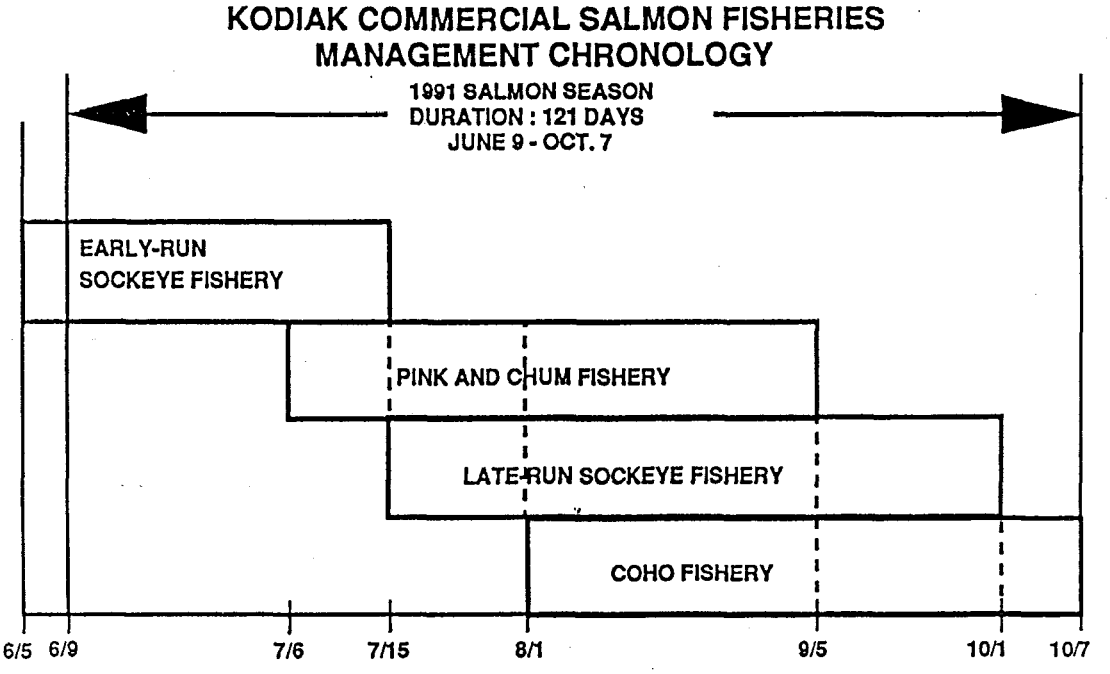
  - Managing pink and chum salmon returns emphasizes using pre-season forecasts initially to determine fishing time and then provides for inseason adjustments in fishing time as the actual run strength becomes more apparent during normal peak harvest periods.

(3) **To adhere to the biological and allocative requirements of all Board of Fisheries Management Plans, to ensure that traditional fishing opportunities for all commercial gear types and all user-groups occur in a manner consistent with the criteria identified in (1) and (2).**

An overview of how ADF&G expects to manage the 1992 salmon fishery to implement the aforementioned harvest strategy is detailed in the following pages. Along with this overview, the management chronology identified on the next page can be used as a guide to clarify why inseason adjustments in harvest strategy, as dictated by species-specific management requirements, are needed. For example, sockeye salmon management requires fishing time and areas open to fishing be strictly regulated by the sockeye salmon escapement information obtained from eight salmon weirs. Pro-rating fishing time for sockeye salmon solely on the basis of pre-season expectations, other than for the June 9 commercial test fisheries, is not an acceptable method of managing Kodiak's sockeye salmon stocks as history has proven. However, for pink salmon management, pro-rating fishing time based upon pre-season expectations is mandatory for prosecuting Kodiak's pink salmon fishery successfully. This can be done with little chance of adverse effects on future production and is the most acceptable way of managing the harvest of Kodiak's relatively large pink salmon returns. Chum and coho salmon require a blend of these two management approaches in that both species are initially harvested as bycatch in fisheries where fishing time is generally targeted on pink salmon. Targeted management and stock-specific fisheries on chum and coho salmon requires proper run strength assessment before these fisheries can occur. This requires a combination of both weir and aerial escapement data and assessment of fish "build-ups" be used along with an inseason assessment of bycatch levels of these species to determine if the post-bycatch returns can adequately support additional near-terminal harvests.

Figure 1.

The management chronology shown below provides a general overview of when species-specific harvest strategies are applied and the 1991 graphical summary of the total salmon harvest by species clarifies why these harvest strategies are applied in the chronology shown.



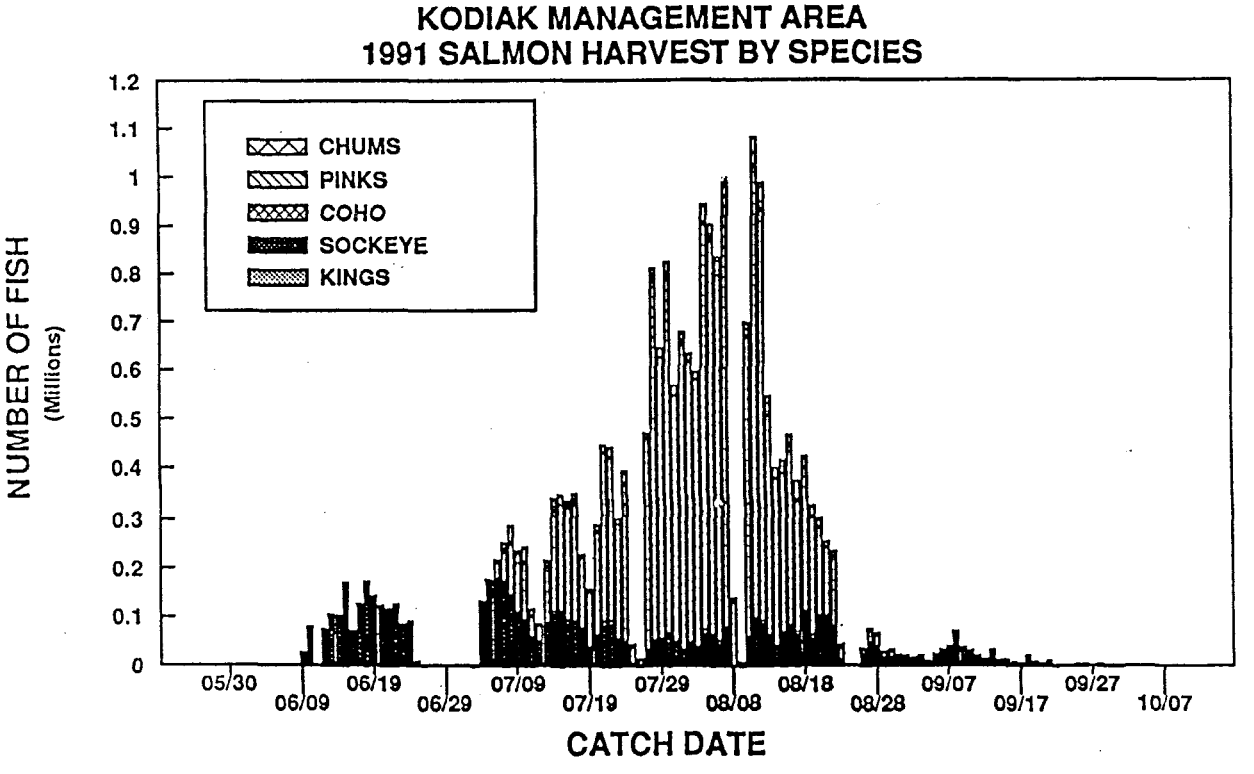


Table 1. Kodiak Management Area 1991 Commercial Salmon Harvest Projections[a]

	CHINOOK	SOCKEYE	COHO	PINK	CHUM	TOTAL
1991 Projected Harvest	15,000	4,304,000	230,000	20,530,000	805,000	25,884,000
1991 Actual Harvest	22,200	5,704,000	324,900	16,642,800	1,026,100	23,723,000
1992 Projected Harvest[b]	10,000	3,247,000	250,000	9,220,000	870,000	14,042,000

FISHERY	1991 HARVEST Projection	1991 HARVEST Actual[c]	1992 HARVEST Projected (as of 12/25/91)
Early Run Sockeye Salmon Fisheries (6/9-7/15)			
Cape Igvak	430,000	361,000	262,500
Karluk	150,000	216,000	150,000
Ayakulik	731,000	894,000	250,000
Fraser	561,000	1,111,200	704,000
Upper Station	177,000	120,800	50,000
Minor Systems	50,000	72,000	75,000
Other	70,000	185,000	70,000
Subtotal	2,169,000	2,960,000	1,561,500
Late Run Sockeye Salmon Fisheries (7/16-10/15)			
Afognak (Hatchery)	0	0	12,000
Cape Igvak	100,000	66,000	97,500
Karluk	900,000	1,160,000	1,000,000
Ayakulik	487,000	544,000	170,000
Fraser	140,000	150,000	176,000
Upper Station	458,000	515,000	125,000
Minor Systems	20,000	185,000	75,000
Other	30,000	124,000	30,000
Subtotal	2,135,000	2,744,000	1,685,500
TOTAL SOCKEYE	**4,304,000**	**5,704,000**	**3,247,000**
Coho Salmon Fisheries (8/1-10/1)			
Afognak	30,000	39,000	20,000
Westside	110,000	155,000	145,000
Alitak	30,000	25,000	20,000
Eastside/Northend Kodiak	25,000	64,000	25,000
Mainland	35,000	42,000	40,000
Subtotal	230,000	325,000	250,000
Pink Salmon Fisheries (7/6-9/5)			
Afognak (Hatchery)	2,830,000	1,391,000	2,320,000
Afognak (Natural)	950,000	602,000	700,000
Westside Kodiak	4,100,000	4,991,000	4,600,000
Alitak	6,100,000	2,374,000	200,000
Eastside/Northend Kodiak	5,050,000	6,169,000	600,000
Mainland	1,500,000	1,166,000	800,000
Subtotal	20,530,00	16,643,000	9,220,000
Chum Salmon Fisheries (6/6-9/5)			
Afognak (Hatchery)	50,000	30,000	25,000
Afognak (Natural)	40,000	42,000	30,000
Westside Kodiak	300,000	267,000	300,000
Alitak	70,000	83,000	60,000
Eastside/Northend Kodiak	110,000	384,000	180,000
Mainland	285,000	223,000	275,000
Subtotal	805,000	1,029,000	870,000
GRAND TOTAL	**25,884,000[d]**	**23,884,000[e]**	**13,597,000[f]**

Footnotes continued on next page

Table 1. Kodiak Management Area 1991 Commercial Salmon Harvest/1992 Harvest Projections (Page 2 of 2)

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[a]All numerical values represent numbers of fish.

[b]1992 harvest projections as of 12/20/91.

[c]Actual harvest estimates by fishery as of 12/20/91. Sockeye harvest estimates by fishery could change as further stock composition work is completed.

[d]Includes 15,000 chinook - projected harvest.

[e]Includes 22,200 chinook - actual harvest

[f]Includes 10,000 chinook - projected harvest.

Table 2.

SEASON OPENING TIMES/DATES BY SPECIES
(For 1992 Kodiak Commercial Salmon Fishery)

FISHERY	EARLIEST OPENING TIME/DATE	
	Firm Time/Date	Approximate Time/Date
Early-Run Sockeye Salmon Fisheries		
- Cape Igvak Section[1/]	-	12:01 A.M. June 7-9
- N.W. Kodiak District[2/]	12:00 Noon June 9	
- Inner Ayakulik and Outer Ayakulik Sections[3/]	-	Low tide June 7-9
- Alitak District[4/]	12:00 Noon June 9	
- Minor Systems[5/]		
Uganik	-	12:00 Noon June 15
Paramanof	-	12:00 Noon June 15
Pauls/Perenosa	-	12:00 Noon June 15
Litnik	-	12:00 Noon June 9-15
Saltery	-	12:00 Noon June 15
Kaflia/Swikshak	-	12:00 Noon June 15
Pink/Chum Salmon Fisheries[6/]		
- Mainland District	12:00 Noon July 6	-
- Afognak District	12:00 Noon July 6	-
- N.W. Kodiak District	12:00 Noon July 6	-
- S.W. Kodiak District	12:00 Noon July 6	-
- Alitak District	12:00 Noon July 6	-
- Eastside Kodiak District	12:00 Noon July 6	
- N.E. Kodiak District	12:00 Noon July 6	-
Late Run Sockeye Salmon Fishery		
- Cape Igvak Section[7/]	-	12:01 A.M. July (?)
- All remaining late-run sockeye fisheries[8/]	-	12:00 Noon July 15
System Specific Coho Salmon Fisheries[9/]		
- Mainland District	-	12:00 Noon Sept. 1
- Afognak District	-	12:00 Noon Aug. 15
- N.W. Kodiak District	-	12:00 Noon Sept. 1
- S.W. Kodiak District	-	12:00 Noon Sept. 1
- Alitak District	-	12:00 Noon Sept. 1
- Eastside Kodiak District	-	12:00 Noon Sept. 5
- N.E. Kodiak District	-	12:00 Noon Sept. 5

[1/] Actual opening date will be determined by sockeye escapement levels into the Chignik River system. Fishing time will be in 24 hour increments.

[2/] Actual opening time/date is as shown. This opening is considered a commercial test fishery; fishing time for this initial period will be 33 hours (12:00 nooon 6/9 through 9:00 P.M. 6/10).

[3/] Actual opening date will be determined by the sockeye escapement level into Ayakulik River and opening time by low tide timing during daylight hours.

[4/] Actual opening time/date is as shown. This opening is considered to be a commercial test fishery; fishing time for the initial period will be 33 hours (12:00 noon 6/9 through 9:00 P.M. 6/10).

[5/] Actual opening time will be determined by sockeye escapement levels into minor systems. Fishing time for this period will be 33 hours (12:00 noon through 9:00 P.M.)

[6/] Actual opening time/date is as shown. Fishing time for this initial period will be 57 hours (12:00 noon 7/6 through 9:00 P.M. 7/8). See section on Fishing Periods for additional information.

[7/] Actual opening date will be determined by sockeye escapement levels into the Chignik River System. Fishing time will be in 24 hour increments.

[8/] Actual opening date for system-specific fishing time will be determined by sockeye escapement levels into major systems. All fishing periods will begin at 12:00 noon and end at 9:00 P.M. prior to 8/16 and end at 6:00 P.M. from 8/16 to season's end.

[9/] Actual opening date for system specific fishing time will be determined by overall coho run strength evaluation and by escapement levels into major systems and minor systems with reliable escapement data.

FISHING PERIODS

- ALL FISHING PERIODS WILL BE BY EMERGENCY ORDER and will generally be based upon inseason assessment of actual run strength.

- ALL REGULAR FISHING PERIODS WILL BEGIN AT 12:00 NOON AND END AT 9:00 P.M., except that:

  - The Cape Igvak fisheries will always begin at 12:01 A.M. and end at 12:00 Midnight during the period 6/5 - 7/25.

  - The Inner Ayakulik Section fisheries will always begin at approximately low water. These will be daylight openings with pre-announced opening times and these fisheries will be initiated by ADF&G "flare openings". When such openings occur, the opening time for Outer Ayakulik Section may be adjusted to coincide with the Inner Ayakulik Section.

  - Beginning on August 16, all fishing periods will end at 6:00 P.M. instead of 9:00 P.M.

- ADVANCE NOTICE FOR EACH FISHING PERIOD

  - All advance notice time will be based upon the initial announcements being made on SSB frequency 4125 Khz, by Peggy Dyson following her **6:00 P.M.** daily weather broadcasts.

  - For the **Cape Igvak fishery**, the initial fishing period will have at least a **36 hour advance notice.** All subsequent fishing periods will have at least 18 hours advance notice.

  - For the **June sockeye fisheries** in the Alitak, S.W. Kodiak, and N.W. Kodiak Districts, **the initial fishing periods** will have at least a **42 hour advance notice**; this includes the normal June 9 fishing period for the Alitak and N.W. Kodiak Districts and the approximate June 15 fishing period for the N.W. Kodiak District.

  - **All subsequent fishing periods for the Kodiak Area prior to July 6 will have at least 18 hours advance notice.**

  - For the **initial pink/chum salmon fisheries,** at least **42 hours advance notice** will be provided, with the fishery starting at 12:00 noon **on July 6.**

  - **All subsequent fishing periods for the Kodiak Area after the initial July 6 fishing period will have at least 18 hours advance notice.**

  - All extensions in fishing time from a pre-announced fishing period will have at least 3 hours advance notice.

- IN PERIOD CLOSURES

- During the period July 6 through July 25 in period closures of "Seaward Zones" designated in the North Shelikof Strait Sockeye Salmon Management Plan may occur. Fishermen who are fishing in management units covered by this plan are advised that in period closures of "Seaward Zones" are possible and that such closures will be announced on SSB frequency 4.125 at 8:00 A.M., 10:00 A.M., 2:00 P.M., or 6:00 P.M. with the effective closure time occurring three hours following the initial announcement time.

- LENGTH OF FISHING PERIODS

SOCKEYE SALMON: In general, each fishing period targeting on sockeye salmon for both early and late runs to all major systems will be dependent upon weir escapement counts. This will also apply to those minor "weired" systems targeted by the commercial fishery.

The exceptions to this will be the normal June 9 commercial test fisheries in the Alitak District and the N.W. Kodiak District (see statistical map on page 35 showing approximate boundaries of these districts). Both of these commercial test fisheries will be 33 hours long. The first period will extend from 12:00 noon Saturday June 9 through 9:00 P.M. Sunday June 10. A second 33 hour commercial test fishery will occur in the N.W. Kodiak District on approximately June 14 or 15 depending upon when this fishery can be coordinated with other terminal sockeye fisheries in order to spread the fishing effort. Additional fishing time in the Alitak District will depend on the results of the June 9 commercial test fishery, the ADF&G test fishery, weir escapements and positive build-up trends. (See Alitak District Management Plan).

In conjunction with this second commercial test fishing period in the N.W. Kodiak District, will be the initial 33 hour fishing period for healthy minor sockeye salmon systems (Uganik, Saltery, etc.). Specific management units (sections) open for this fishery will be dependent upon the strength of the runs associated with these units. The E.O. announcement for this opening will specify which sections are to be opened.

Fishing periods in the Cape Igvak Section will continue to be in increments of 24 hours running from 12:01 A.M. to 12:00 Midnight. Fishing time will be dependent upon an evaluation of the Chignik System sockeye salmon run, the predominant contributing stock harvested in this section. A review of the Cape Igvak management plan listed in this document should clarify the biological and allocative requirements of this plan. For the 1992 season, as in past seasons, fishing time will initially be allocated in the Cape Igvak Section based upon the criteria listed in paragraph (c) of the plan.

For most late-run sockeye salmon stocks, a portion of the harvestable surplus is commonly taken as bycatch during targeted pink salmon fishing periods. Consequently, a "blended" management strategy is needed to insure minimum escapements are achieved by species with desired escapement requirements not being exceeded. The Westside Kodiak Management Plan on page 18 and 19 provides an overview of which stocks and time periods are targeted for management.

PINK SALMON:

The total 1992 projected pink salmon harvest of 9.22 million fish, which includes Kitoi Bay Hatchery's projected contribution of 2.32 million pink salmon, represents a potentially below average harvest of pink salmon for an even year return and approximately one-half of the actual pink salmon harvest in 1991. Overall, pre-emergent fry densities from the 1990 brood year were below the recent five even year returns (1982-1990). This potential low production may be attributed to overwinter mortality from freezing due to extremely low temperatures during November 1990 which occurred during a time of relatively low water flows. Early marine survival conditions were generally poor due to adverse weather conditions from mid-April to mid-May (1991).

If the 1992 pink salmon return develops as forecasted, closed waters in Terror Bay, Uganik Bay, Zachar Bay and Uyak Bay may need to be increased as soon as July 13 to assure that pink salmon escapement goals are achieved in the major spawning systems. In addition, fishing opportunities may be severely restricted in the Humpy-Deadman Section after July 15 to assure pink salmon escapement goals for major spawning systems in the Alitak Bay District are met. The 1992 harvest strategy for Area K pink salmon management will emphasize the three central management criteria identified in the Introduction.

In consideration of the forecasted strength of the 1992 pink salmon return, the 1992 pattern of fishing periods for those management units where pink salmon are the targeted management species is expected to vary in fishing time from 2-1/2 days to 3-1/2 days per week during the time of July 6 through approximately August 25. Continuous fishing during the peak of the return, July 30 through August 10, is possible if pink salmon returns to Kitoi Bay Hatchery, Ayakulik and Karluk rivers develop as expected.

Listed below are projected fishing period scenarios which can be used for planning purposes by both ADF&G and industry. Changes in these scenarios should be expected if significant deviations in the actual pink salmon return occurs. Less fishing time should be expected in management units where chum salmon are the targeted management species

- **First Period: 2-1/2 days/57 hours - 12:00 Noon July 6 through 9:00 P.M. July 8.**

  - For recent even years, this initial fishing period has consistently been 2-1/2 days in duration. This period provides harvest data important for early run-strength assessment for Area K's entire pink salmon run as well as for specific chum salmon stocks. No extensions in fishing time based on pink or chum salmon harvests would occur during this period.

- **Second Period: 3-1/2 days/81 hours - 12:00 Noon July 13 through 9:00 P.M. July 16.**

  - This second period will help ensure that early run pink salmon stocks and several major chum salmon stocks are adequately harvested per the stated management goals and at least minimum escapements are ensured. Assessment of run strength for both species will emphasize harvest data, and initial bay build-ups for both species will be somewhat apparent during this period. No extensions in fishing time based on pink or chum salmon harvests would occur during this period. **The Inner Uganik, Terror, Uyak, and Zachar Bay Sections may remain closed beginning with this fishing period.**

- **Third Period: 3-1/2 days/81 hours - 12:00 Noon July 20 through 9:00 P.M. July 23.**

  - This third period will occur following a 3-1/2 day closure to allow an influx of fish into terminal areas of pink and chum salmon to enhance the "build-ups" of potential escapement fish. This is the first fishing period when the combination of harvest and early escapement/build-up information will provide the initial indications of actual run strength for major pink salmon fisheries. While no extensions in fishing time are expected during this period, the assessment results of this period have commonly resulted in reduced fishing time during the fourth period for years of weaker than expected pink salmon returns.

- **Fourth Period: 3-1/2 days/81 hours - 12:00 Noon July 27 through 9:00 P.M. July 30.**

  - This fourth period is a critical period in that the peak harvest dates and a fairly accurate assessment of total run strength should be evident by period's end. Commonly, extensions in fishing time occur off of this period for years when returns are equal to or stronger than expected. Fishing time in the Inner and Outer Karluk Sections, the Sturgeon, Halibut Bay and Ayakulik Sections should be expected.

- **Fifth Period: 3-1/2 days/81 hours - 12:00 Noon August 3 through 9:00 P.M. August 6.**

  - This fifth period should be the peak harvest period in 1992 provided normal run timing occurs. If pre-season expectations appear valid, extensions in fishing time could occur in portions of the management area. This period commonly yields the first significant announcement of differential

fishing time by management unit as heavy production areas are targeted for extensions while moderate or lower production areas are not.

- Sixth Period: 3-1/2 days/81 hours - 12:00 Noon August 10 through 9:00 P.M. August 13.

  - This sixth period should be the first post-peak period and is important from the standpoint that returns to major late production systems should be evident by period's end. Also, this is a critical period for seriously considering expansions in closed water sanctuaries to enhance escapement levels and to make a final evaluation of run strength to determine if further reductions in fishing time are needed for the remaining periods to ensure adequate escapement; a strategy for "topping-off" escapements for all systems stems from this period.

- Seventh Period: 3-1/2 days/78 hours - 12:00 Noon August 17 through 6:00 P.M. August 20.

  - This seventh period is when a more "blended", multi-species management approach is needed for those sections where pink salmon had been the targeted species for the previous six periods. Emphasis will still be on harvest of excess good quality pink salmon and on achieving at least minimum pink salmon escapements where applicable, however major concern will be directed toward the run strength of late run sockeye and chum salmon.

- Eighth Period: 3-1/2 days/78 hours - 12:00 Noon August 24 through 6:00 P.M. August 27.

  - This eighth period will be primarily a "clean-up" period for most pink salmon stocks. All escapement requirements should be assured and excess pink salmon of acceptable quality should be available for harvest in near terminal areas where applicable. This period will require a major emphasis on multi-species management; it is a critical management period for late run sockeye salmon, chum salmon stocks, and early run coho salmon stocks.

CHUMS AND COHO: A large portion of the 1992 Kodiak chum and coho salmon harvest will occur as bycatch in non-terminal locations during fishing periods having fishing time associated with major pink salmon fisheries. System-specific chum and coho salmon fisheries which occur during the pink salmon fishery will commonly result in pertinent management units having less fishing time than management units targeting primarily pink salmon stocks. This approach emphasizes the use of more terminally located management units for targeted chum and coho salmon management (i.e. Inner Kukak Section, Zachar Bay Section, Kizhuyak Section, etc.)

EMERGENCY ORDER INSEASON ANNOUNCEMENTS ("GETTING THE WORD")

- Fishing period announcements are never predictable because the fishery is managed on data evaluation which is compiled daily, i.e. (1) escapements via weir counts and/or aerial surveys, (2) harvest trends (total catch and Catch Per Unit Effort (C.P.U.E.)) and (3) information on fish "build-ups".

- Once enough information has been collected to determine adequate fishing time to harvest surplus fish, an emergency order is "immediately" issued in the following manner:

1/ A news release is constructed detailing:
   a. The date, time, and number of the emergency order announcement.
   b. The length of the fishing period.
   c. The opening and closing times and dates of the fishing period.
   d. The areas open to fishing.
   e. The areas closed to fishing (those sections not listed as being open).

f. The location of "closed water" marker adjustments.
g. Justification for the opening/closing

2/ Copies of the news release are posted on the windows of the entrance doors to the Kodiak ADF&G office.

3/ Copies are made available for the public at the Kodiak office during working hours; for after-hours availability, copies are stored in a manila envelope taped to the window by the main entrance door.

4/ The news release is recorded on a 24-hour recorded message phone (Number 486-4559).

5/ The news release is made available to three local radio stations (K.V.O.K., K.M.X.T., and K.G.T.L.) to be played by these stations at pre-designated times during the day.

6/ The news release is announced over 4125 by Peggy Dyson following her weather schedules. Commonly, the first reading of a news release occurs after Peggy's 6:00 P.M. schedule, but occasionally the 8:00 A.M. schedule for the initial reading.

7/ The news release is distributed to all processors either by hand, verbally on the telephone, by tele-fax, or by calling the ADF&G recorded message phone; this information is then passed along to their respective tenders.

8/ Information on the most current news release or emergency order can also be obtained by calling the Kodiak ADF&G office during working hours or by calling either Dave Prokopowich (486-6007), or Kevin Brennan (486-6475) after working hours or on weekends.

9/ Copies of emergency orders for each news release are mailed to a current listing of required and interested recipients.

10/ Many fishermen, ADF&G vessels and camps, and Fish and Wildlife Protection vessels use a small tape recorder to document the exact wording of each announcement as broadcast by Peggy Dyson. This is a prudent thing to do when considering the complicated nature of each announcement and considering the new District and Section boundaries.

NEW REGULATIONS

There were no new regulations pertaining to the Kodiak commercial salmon fishery adopted by the Alaska State Board of Fisheries for 1992.

New Karluk Closed Water Sanctuary:

- Due to the problems encountered in 1991 with the closed water sanctuary seaward of Karluk Lagoon as described in section 5 AAC 18.350 the following closed water sanctuary will be in effect near the entrance to Karluk Lagoon, stream no. 255-101:

  5 AAC 18.350 CLOSED WATERS

  (2) Southwest Kodiak District

  (E) That portion of the Southwest Kodiak District (off of the entrance to Karluk Lagoon (stream no. 255-101)) enclosed by a line from 57°34'28" N. lat., 154°28'18" W. long. to 57°34'32" N. lat., 154°26'42" W. long. (NOAA Chart #16598). See attached map on page 34.

MISCELLANEOUS REGULATORY CLARIFICATIONS

Boundary Determinations:

- When determining the location of a particular district/section boundary, or any inseason emergency order boundary, the latitude and longitude as plotted on a NOAA navigational chart (approximate scale 1:80,000.) will represent the **correct** boundary locations. Latitude and longitude as determined by Loran bearings represent **incorrect** boundary locations for purposes of determining the aforementioned boundaries.

Boundaries - The Raspberry Straits Section **is not** part of the Southwest Afognak Section.

Closed Water Adjustments

- As a result of conflicting interpretations of Alaska Statute 16.05.785 **FAILURE TO REMOVE MARKERS** (see the 1992 Finfish Regulation Book) there will be no inseason adjustments of closed waters (as described in Section 5 AAC 18.350) unless ADF&G personnel will be able to remove old markers and install new markers or unless inseason adjustments of closed waters are made to a specific stream terminus. All adjustments to closed waters listed in 5 AAC 18.350 will be made by emergency order.

Closed Water Sanctuaries

- In areas where ADF&G has deployed regulatory markers to establish waters closed to fishing, a straight line closure is in effect provided that **no portion of that line is less than 500 yards from the seaward extremities of the exposed tideland banks which designates the stream mouth.** Consequently, common closed water configurations will be areas of various shapes, depending upon the nature of each individual stream mouth extending between the two regulatory markers.

  In areas where ADF&G has deployed regulatory markers to establish waters closed to fishing in **bays** a straight line closure is in effect.

  In the Mainland District, ADF&G is expanding its stream marker program. Fishermen participating in salmon fisheries located in portions of the Mainland District should be aware that closed water sanctuaries may be larger in some areas due to the placement of markers which will normally provide some protection for "build-up" fish during low tide.

Three Mile Limit

- **According to Title 50, part 674 of the Code of Federal Regulations it is unlawful to engage in commercial fishing for salmon in waters seaward of the state (the "three mile limit") territorial sea boundary west of Cape Suckling.**

  During the 1989 Board of Fisheries meeting held in Kodiak, board members expressed concern regarding increasing numbers of Kodiak purse seine fishermen fishing further than three miles offshore; Board members decided that no changes needed to occur in state regulations in regard to prohibiting fishing outside the territorial sea boundary since they were informed by ADF&G Headquarters staff there were federal regulations which already prohibited salmon fishing outside the "three mile limit" and the state baseline description of "Waters of Alaska" was not valid.

  However, in 1992, **it will continue to be illegal to commercial fish for salmon beyond the "three mile limit".** This will be enforced by both National Marine Fisheries Service Enforcement Division and State Fish & Wildlife protection officers. An E.O. will be issued which closes all waters of the Kodiak Management Area outside the State Territorial sea boundary ("three mile limit") to commercial salmon fishing for the entire 1992 season.

Purse Seine Practice Sets

- Contact the Kodiak Fish and Game office (Phone: 486-4791) for information regarding purse seine practice sets.

Purse Seine Leads

- Minimum mesh size is seven (7) inches. Double panels of web overlapped in the lead will not be legal.

Set Gillnets - Operation of Gear

- Leads: "Seine webbing" used as a lead for set gillnets is not intended to "gill salmon". Set gillnet leads which have similar mesh size and web construction to the actual set gillnet gear will not be considered legal gear.

- Operation of Set Gillnets: Set gillnets must be operated in substantially a straight line, except that no more than 25 fathoms of a set gillnet may be used as a hook. A hook may be used in any configuration. When a set gillnet is being operated primarily as a "hook in any configuration" it will be considered illegal to actively operate that gillnet as a seine or beach seine (such as "round hauling").

FISH TICKETS

A reminder to all fishermen to check the statistical area recorded on each of your fish tickets. It is required that the correct harvest location(s) be shown on each ticket and it is the responsibility of each fisherman to ensure tender operators or the cannery personnel record the correct harvest location on each ticket. This information is extremely useful in evaluating inseason harvest levels, stock contribution, and effort distribution.

SEINERS: Please provide estimates of harvest by area to tender operators. For example "1/3 of my reds were from Cape Alitak (257-20) and the rest were from Red River (256-20). The rest of my fish were 1/2 and 1/2 from each of these areas". Prior to signing your tickets, check to make sure the proper harvest information by **STATISTICAL AREA** has been entered.

Of particular importance will be to ensure the harvest from that portion of the Shelikof Strait regulated by the Shelikof Strait sockeye salmon management plan is properly recorded. In order to provide an accurate accounting of sockeye salmon harvests in the area, ADF&G in conjunction with Fish and Wildlife Protection, will conduct an extra monitoring effort of harvest activity and tendering operations in this area during the time period pertinent to this plan, i.e. July 6 -25.

GILLNETTERS: Because of the fixed nature of your gear, each permit holder's reporting area should be consistent between landings. However, in the event that you become "exploratory" with your nets and move into a new statistical area, please provide the tender operator with that information. Prior to signing your tickets, ensure that the proper harvest information by **STATISTICAL AREA** has been entered.

MANAGEMENT PLANS

Currently there are five (5) Board of Fisheries approved management plans which provide guidance to ADF&G for specific portions of the Kodiak Management Area. Also, there is a sixth (6) management plan associated with the production from Kitoi Bay hatchery. A listing of these management plans and the units affected are as follows:

MANAGEMENT PLAN	YEAR INITIATED	MGMT. UNITS AFFECTED	DATES IN EFFECT
Cape Igvak Mgmt. Plan	1978	Cape Igvak Section Wide Bay Section	6/5 - 7/25
Kitoi Bay Hatchery Mgmt. Plan	1981	Kitoi Bay Section Izhut Bay Section Duck Bay Section	6/9 - 10/1
Alitak District Mgmt. Plan	1987	Alitak Bay District	6/9 - 10/1
Westside Kodiak Mgmt. Plan	1990	N.W. Kodiak District S.W. Kodiak District S.W. Afognak Section	6/9 - 10/1
Crescent Lake Mgmt. Plan	1990	Portion of the Central Section in Vicinity of Port Lions	8/1 - 9/15
N. Shelikof Strait Sockeye Mgmt. Plan	1990	S.W. Afognak Section N.W. Afognak Section Shuyak Section Big River Section Hallo Bay Section Inner and Outer Kukak Sect. Dakavak Section	7/6 - 7/25

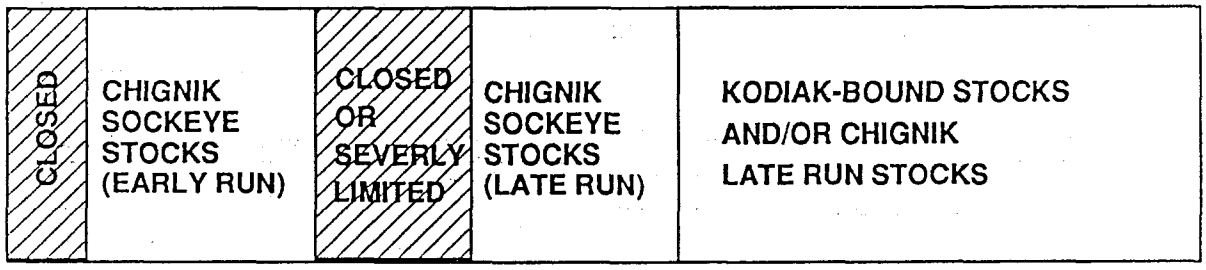
As with any good plan, the test of time and a continued review process will determine its effectiveness at accomplishing the desired biological and allocative goals. To date only the Cape Igvak, the Kitoi Bay hatchery, and the Alitak District Management plan have been adequately exposed to this degree of scrutiny. The 1992 season will provide additional opportunities to evaluate the merits of the other three Board approved plans. One of these, the Westside Kodiak Management Plan, has basically been implemented by Emergency Order over a several year period. This plan covers the greatest geographical area and affects more user groups and gear types than any other plan, it's expected to be implemented without any problems. Likewise, the Crescent Lake Plan is associated with a relatively small coho enhancement project which could impact the subsistence fishery in the vicinity of Port Lions and thus a plan was needed to clarify coho fishery priorities for that area. Undoubtedly the greatest test of a management plans intended purpose will occur in those management units effected by the North Shelikof Strait Sockeye Management Plan. Because this new plan potentially restricts the fishing locations of Kodiak's mobile seine fleet under certain harvest situations identified in the plan, many permit holders are apprehensive that the plan will adversely affect normal fishing opportunities on Kodiak stocks. Proper implementation of this plan in 1992 will require a major communication effort between ADF&G and the industry. As with any of these plans, if there is a need for plan clarification, all inquiries, suggestions, and concerns are encouraged to be directed to ADF&G, Kodiak.

Figure 2.

KODIAK MANAGEMENT AREA
CAPE IGVAK MANAGEMENT PLAN

THE REGULATORY REQUIREMENTS OF THIS PLAN ARE DESCRIBED IN THE 1992 COMMERCIAL FINFISH REGULATION BOOK. A DIAGRAM OF THE CHRONOLOGICAL REQUIREMENTS OF THIS PLAN IS SHOWN BELOW ALONG WITH THE BIOLOGICAL AND ALLOCATION CRITERIA OF THIS PLAN. THE HARVEST PROJECTIONS FOR THE CHIGNIK SOCKEYE RETURN INDICATES THAT THE EARLY-PRODUCTION WILL BE ABOVE AVERAGE AND THAT THE LATE PRODUCTION SHOULD CONTINUE AT OR ABOVE AVERAGE. THE CAPE IGVAK HARVEST PROJECTIONS FOR THE 1992 SEASON ARE SHOWN ON PAGE 3 OF THIS DOCUMENT.

MANAGEMENT CHRONOLOGY FOR CHIGNIK-BOUND SOCKEYE AND KODIAK SALMON



BIOLOGICAL AND ALLOCATIVE CRITERIA FOR MANAGING THE CAPE IGVAK FISHERY ON CHIGNIK-BOUND SOCKEYE

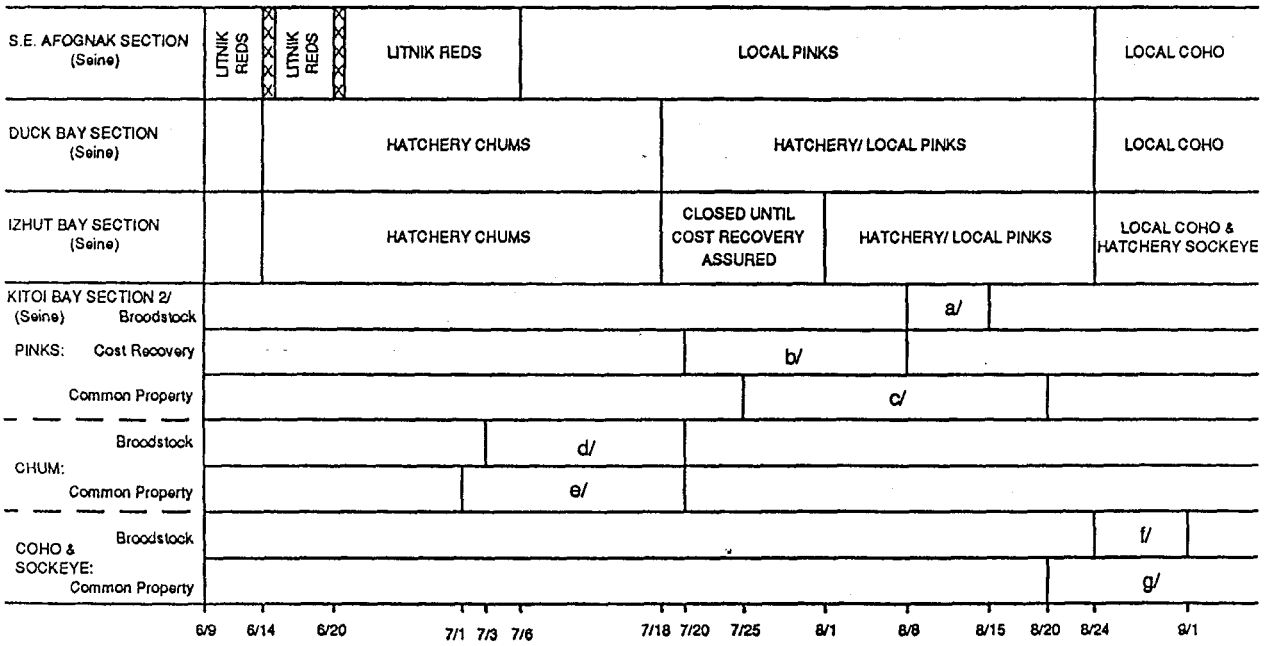
BIOLOGICAL REQUIREMENTS			ALLOCATIVE REQUIREMENTS		
REGULATION 5AAC 18.360	ESCAPEMENT NEEDS CHIGNIK (EARLY RUN)	ESCAPEMENT NEEDS CHIGNIK (LATE RUN)	REGULATION 5AAC 18.360	CHIGNIK MINIMUM HARVEST	IGVAK %
(a) (b) (c)	THROUGH 6/30 350,000-400,000	-	(a)	EXPECTATIONS OF LESS THAN 600,000	CLOSED
-	-	-	(b)	EXPECTATIONS OF 600,000 ARE IN DOUBT	CLOSED
(a) (b) (c)	-	THROUGH 7/30 195,000-200,000	(c)	EXPECTATIONS OF 600,000 OCCUR	OPEN TO ACHEIVE 15%
-	-	-	(d)	CHIGNIK SALMON % INTERCEPTION CALCULATIONS	80% OF CATCH AT IGVAK ARE CHIGNIK SOCKEYE
-	-	-	(e)	ALLOCATION PERIOD 600,000	6/5 - 7/25 % NOT APPLICABLE
(f)	FROM JUNE 26 - JULY 9 CAPE IGVAK SECTION CLOSED OR SEVERLY LIMITED UNTIL CHIGNIK LAKE RUN EVALUATED		-	-	-
-	-	-	(g)	-	ONE DAY ADVANCE NOTICE
	400,000	250,000		600,000 MINIMUM	15 %

Figure 3.

KODIAK MANAGEMENT AREA
KITOI BAY HATCHERY MANAGEMENT PLAN

This plan reflects the relatively complex harvest strategies which are required to properly manage the returns of hatchery produced fish and still provide protection for eastside Afognak natural salmon runs. Because of the revenue generated from the record hatchery return in 1989, no cost recovery fisheries are expected in the 1992 season. All other aspects of the plan diagramed below will be implemented per the approximate dates shown. A detailed management plan is available at either the Kitoi Bay hatchery or the Kodiak ADF&G office.

TARGETED SPECIES BY SYSTEM AND TIME FOR SPECIFIC MANAGEMENT UNITS 1/



XXX - fishing time dependant upon sockeye escapement into Litnik system.

[1] Included in this management plan are the harvest strategies for current natural and hatchery prodution as well as future hatchery production.

[2] The management plan required for the Kitoi Bay Section is rather complicated in order to achieve broodstock, cost recovery, and common harvest requirements. This is further complicated by the multispecies production currently occurring at Kitoi Bay hatchery. The diagram shown attempts to approximate dates for when specific management strategies should be implemented to insure achievement of hatchery goals and an orderly harvest of quality common property fish.

[a] Hatchery pink salmon broodstock captured.
[b] Hatchery pink salmon cost recovery fishery when necessary.
[c] Hatchery pink salmon common property fishery.
[d] Hatchery chum salmon broodstock captured.
[e] Hatchery chum salmon common property fishery.
[f] Hatchery coho and sockeye salmon broodstock captured.
[g] Hatchery coho and sockeye salmon common property fishery.

KODIAK MANAGEMENT AREA
ALITAK DISTRICT MANAGEMENT PLAN

This plan will follow the diagram shown (Figure 4) as much as possible. Dates listed in the plan are approximate and may vary with changes in run timing; an exception is the June 9 commercial test fishery, which is a firm date.

The management chronology for Olga Bay stocks (Figure 4) identifies the targeted management stocks by approximate time period. In situations where two or more targeted stocks overlap in run timing a "blended" management approach will occur, whereby adequate fishing time will be provided to ensure desired escapement goals are not exceeded for the more dominant stock(s) yet that the minimum escapement goals for the less dominant stock(s) are achieved. As decreed by the Board of Fisheries, fishing time directed on these stocks will occur simultaneously in the traditional management units for harvesting these stocks, namely the Cape Alitak Section and the Moser/Olga Bay Section. Management for these stocks will emphasize an aggressive strategy to contain the harvest to these traditional harvest units; this strategy also applies to the remainder of the stocks in the Alitak Bay District.

The regulatory wording for implementing this management plan appears in the 1992 Commercial Finfish Regulation Book. However, the specifics for managing the 1992 returns need to consider the expected magnitude of the targeted stocks returning to the Olga Bay systems. As indicated in the pre-season harvest expectations on page 3, the sockeye salmon returns to Alitak are expected to yield relatively strong early-run sockeye salmon production from the Fraser system and comparatively moderate production from late-run sockeye salmon from the Upper Station system. In conjunction with the late-run sockeye production, a moderate (at best) return of Dog Salmon pink salmon is expected to be simultaneously available to the fishery. However because both stocks are expected to be of moderate proportions, harvestable surplus for both stocks should be taken in the traditional Cape Alitak, and Moser/Olga Bay Sections; fishing time in the Upper Olga Bay Sections is not expected in 1992 unless the Upper Station return is much stronger than forecasted.

Some specific points to stress this year are:

- The approximate June 12 through June 24 period is identified as an aggressive management time for Fraser sockeye salmon.
- This means, to maintain equitable and orderly harvest opportunities for all gear types, and the need to insure that escapement requirements are achieved for the 1992 season, the minimum escapement goal for Fraser sockeye salmon (140,000) will be targeted.
    - the minimum pink salmon escapement requirements for the Dog Salmon system is 40,000 fish and the desired goal is 120,000 fish..
- In the event that fishing time is required in Upper Olga Bay management units, minimum advance notice will be as identified on page 6.
- Sockeye returning to Akalura will be aggressively managed (Inner Akalura Section) to insure the sockeye escapement does not exceed 60,000 fish.

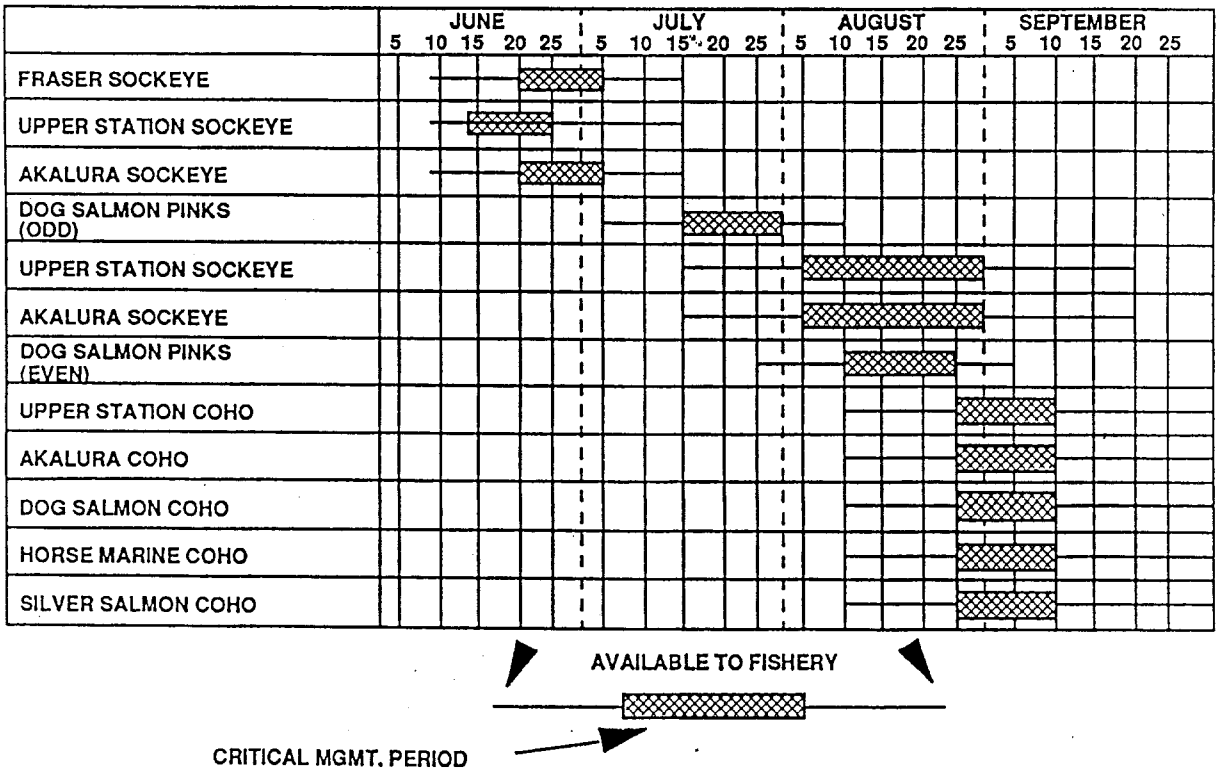
Figure 4.

ALITAK BAY DISTRICT MANAGEMENT PLAN

CAPE ALITAK SECTION (SEINE)	CLOSED	FRASER SOCKEYE (AGGRESSIVE MANAGEMENT STRATEGY)	FRASER SOCKEYE (CONSERVATIVE MANAGEMENT STRATEGY)	ODD YEAR CYCLE FRASER PINKS EVEN YEAR CYCLE UP.STATION SOCKEYE (LATE RUN)	ODD YEAR CYCLE UP.STATION SOCKEYE EVEN YEAR CYCLE UP.STATION SOCKEYE & FRASER PINKS		ALL ALITAK DISTRICT COHO SYSTEMS
MOSER/OLGA BAY SECTION (GILLNET) (TRADITIONAL)	CLOSED	FRASER SOCKEYE (AGGRESSIVE MANAGEMENT STRATEGY)	FRASER SOCKEYE (CONSERVATIVE MANAGEMENT STRATEGY)	ODD YEAR CYCLE FRASER PINKS EVEN YEAR CYCLE UP.STATION SOCKEYE (LATE RUN)	ODD YEAR CYCLE UP.STATION SOCKEYE EVEN YEAR CYCLE UP.STATION SOCKEYE & FRASER PINKS		ALL OLGA BAY COHO SYSTEMS
OUTER UPPER & INNER UPPER STATION (GILLNET) (NON-TRADITIONAL)	CLOSED	UPPER STATION SOCKEYE (EARLY RUN)		UPPER STATION SOCKEYE (LATE RUN)		UP. STATION SOCK & COHO	UPPER STATION COHO
OUTER AKALURA & IN. AKALURA STATION (GILLNET) (NON-TRADITIONAL)	CLOSED	AKALURA SOCKEYE (EARLY RUN)		AKALURA SOCKEYE (LATE RUN)		AKALURA SOCK & COHO	AKALURA COHO
DOG SALMON FLATS SECTION (GILLNET) (NON-TRADITIONAL)	CLOSED	FRASER SOCKEYE (MOP UP FISHERY)		FRASER PINKS		FRASER AND HORSE MARINE COHO	
HUMPY/DEADMAN SECTION (SEINE)	CLOSED	FRASER SOCKEYE (AGRESSIVE MANAGEMENT STRATEGY)	FRASER SOCKEYE (CONSERVATIVE MANAGEMENT STRATEGY)	ALITAK BAY PINKS/CHUMS/COHO			

6/1 6/9-10 6/24 7/9 7/15 8/9 8/20 8/26 9/25

KODIAK MANAGEMENT AREA - ALITAK BAY DISTRICT
PRIMARY MANAGEMENT SPECIES BY STREAM BY TIME



KODIAK MANAGEMENT AREA
WESTSIDE KODIAK MANAGEMENT PLAN

The Board of Fisheries, at their December 1989 meeting in Kodiak, adopted into regulation this management plan which identifies the management chronology for major Westside Kodiak salmon stocks.

The goal of this Management Plan is to achieve escapement and harvest objectives of sockeye salmon returning to the Karluk, Ayakulik, and other Westside minor systems, and of pink, chum, and coho salmon returning to systems in the Southwest Afognak, Central, North Cape, Anton Larsen Bay, Sheratin Bay, Kizhuyak Bay, Terror Bay, Inner Uganik Bay, Spiridon Bay, Zachar Bay, Uyak Bay, Outer Karluk, Inner Karluk, Sturgeon Bay, Halibut Bay, Outer Ayakulik and Inner Ayakulik Sections. The intent of the Board is to insure that salmon bound to these systems be harvested to the extent possible by the traditional fisheries located in all 17 sections. The plan directs the department to manage the Northwest Kodiak and the Southwest Kodiak Districts and the Southwest Afognak Section in accordance with the guidelines set out in this plan as described in the 1992 Commercial Finfish Regulation Book and as described in Figure 5.

This plan was submitted as a proposed regulation to the Board of Fisheries by the Kodiak Management Staff in order to allow industry the opportunity to comment on existing harvest strategies and to clarify their intent. Frequently Kodiak fishermen had expressed concerns over how the department will manage the Westside management units (sections) in the 1990's when local sockeye stocks are projected to be near maximum production, since this will affect the traditional harvest opportunities between fixed and mobile gear. The annual harvest strategy has traditionally invoked a "blend" of fishing time between the 17 management units covered by this plan. At times this "blend" has not been totally understood by industry and has resulted in enough allocative uneasiness that future management stability could be jeopardized. Guidelines for this "blend" needed to occur in regulatory form to specifically identify inseason harvest strategy and to dispel any concern and confusion. Again, the previous regulatory structure did not provide the information needed by industry to evaluate inseason management decisions which affect allocation concerns of the three gear types affected by this plan.

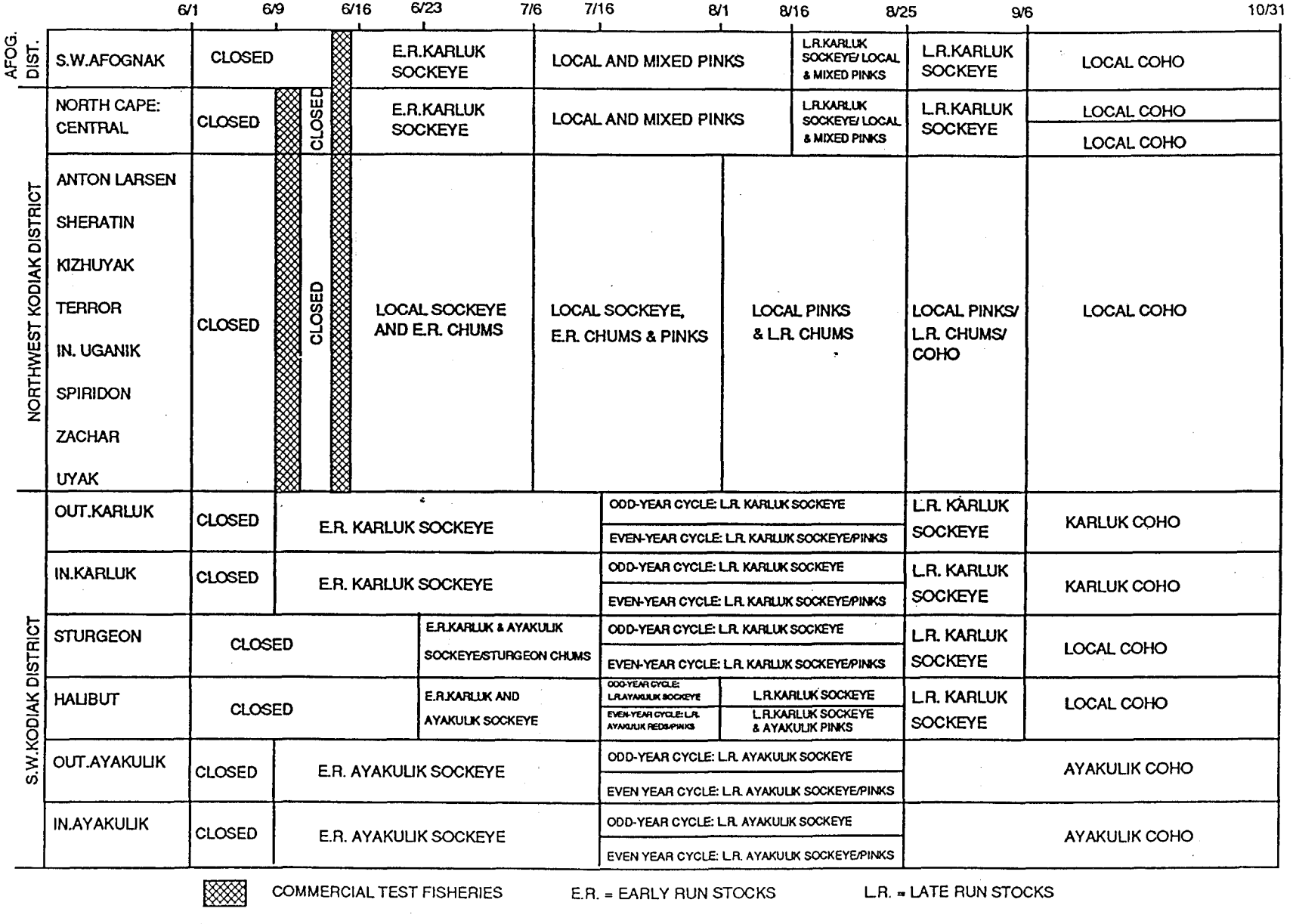
This management plan reflects the realization of long-term management goals and identifies current management practices both of which were initially implemented in 1971. The basis for these goals and practices was primarily to rebuild depleted Karluk and depressed Ayakulik sockeye salmon stocks. This plan provides a predictable management framework for these rebuilt stocks, as well as pertinent major pink, chum and coho salmon stocks, and helps to stabilize fishing opportunities between the three gear types on the highest quality fish in these districts and sections.

The regulatory wording of this plan appears in the 1992 Commercial Finfish Regulation Book and a diagram summarizing the plan occurs on the next page.

Figure 5.

WESTSIDE KODIAK MANAGEMENT PLAN

MANAGEMENT CHONOLOGY BY MANAGEMENT UNITS FOR MAJOR WESTSIDE SALMON STOCKS



KODIAK MANAGEMENT AREA
CRESCENT LAKE MANAGEMENT PLAN

As indicated earlier, this management plan is associated with a relatively small coho enhancement project which could impact the subsistence fishery in the vicinity of Port Lions. This plan clarifies the harvest priorities for coho salmon returning to the Settler Cove area near Port Lions. A copy of the regulations guiding this plan are listed below as well as in the 1992 Commercial Finfish Regulation Book.

5 AAC 18.364. CRESCENT LAKE COHO SALMON MANAGEMENT PLAN. (a) The Department shall manage the commercial, sport, and subsistence fisheries in Settler Cove to provide for full utilization of the enhanced stock of coho salmon returning to Crescent Lake in accordance with the Crescent Lake Coho Salmon Management Plan in this section.

(b) Sport and subsistence fisheries are allowed in all waters of Settler Cove consistent with 5 AAC 64 and 5 AAC 01.

(c) The department may open, by emergency order, those waters of Settler Cove between the causeway and a line from the seaward end of the Port Lions breakwater to a department marker located directly across Settler Cove from the breakwater to the commercial taking of salmon only as follows:

(1) the department may not allow the commercial taking of salmon before September 16; and

(2) before opening the fishery, the department shall determine that 500 or more coho salmon are available in Settler Cove for harvest. (Eff. 4/19/90, Register 114)

KODIAK MANAGEMENT AREA
NORTH SHELIKOF STRAIT SOCKEYE SALMON MANAGEMENT PLAN

The Board of Fisheries in December 1989 created this management plan in response to concern that the fishing patterns and quantities of sockeye harvested by Area K seiners in 1988 represented the onset of an expansion of the interception of Cook Inlet bound sockeye in Kodiak Area waters. This plan was meant to contain this interception to not exceed estimated historical interception levels yet still provide for traditional opportunities to harvest high quality pink and chum salmon from local stocks. **The major impact of this plan was to create "sockeye harvest caps" for that portion of the North Shelikof which encompasses eight (8) management units.**

The regulatory wording for this new management plan is listed below and a map identifying the "location of the boundaries" between the **seaward and shoreward zones** are on the following page.

- **From July 6 through July 25** in the Dakavak Bay, Outer Kukak Bay, Inner Kukak Bay, Hallo Bay, and Big River Sections of the Mainland District, and in the Shuyak Island and Northwest Afognak Sections of the Afognak District, the department shall manage the fishery as follows:

  - **Management of the fishery must be based on local stocks;**

    - **the fishery may remain open during normal fishing periods until the harvest exceeds 15,000 sockeye salmon;**

    - **when the harvest exceeds 15,000 sockeye salmon, the department shall restrict the fishery by emergency order to waters of the (shoreward zones):**

      - Dakavak Bay, Outer Kukak Bay, Inner Kukak Bay, Hallo Bay. and Big River Sections west of a line from Cape Douglas at 58°51'06" N. lat, 153°14'54" W. long, to a point at 58°42'40" N. lat, 153°26'18" W. long, to a point east of Swikshak River at 58°38'06" N. lat., 153°35'24" W. long., to Cape Chiniak at 58°31' N. lat., 153°54'21" W. long., to Cape Nukshak at 58°23'30" N. lat., 153°57' W. long., to Cape Ugyak at 58°16'36" N. lat., 154°06'03" W. long., to Cape Gull at 58°13' N. lat, 154°08'30" W. long., to Cape Kuliak at 58°08'11" N. lat., 154°12'34" W. long., to Cape Atushagvik at 58°05' N. lat., 154°18'48" W. long., to Cape Ilktugitak at 58°01'12" N. lat., 154°34'48" W. long to the southern entrance of Dakavak Bay at 58°01' N. lat., 154°43'30" W. long.

      - Shuyak Island and Northwest Afognak Sections south and east of a line from Point Banks at 58°38' N. lat., 152°18'54" W. long., to Dark Island at 58°38'45" N. lat., 152°33'05" W. long., to Gull Island at 58°35"48" N. lat., 152°38'45" W. long., to the northern entrance of Big Bay at 58°34'06" N. lat., 152°40'12" W. long., to the western entrance of Blue Fox Bay at 58°27'41" N. lat., 152°43'42" W. long., to Black Cape at 58°24'33" N. lat., 152°53'09" W. long., to Cape Paramanof at 58°18'21" N. lat., 153°02'45" W. long.

- **From July 6 through July 25** in the Southwest Afognak Section of the Afognak District, the department shall manage the fishery as follows:

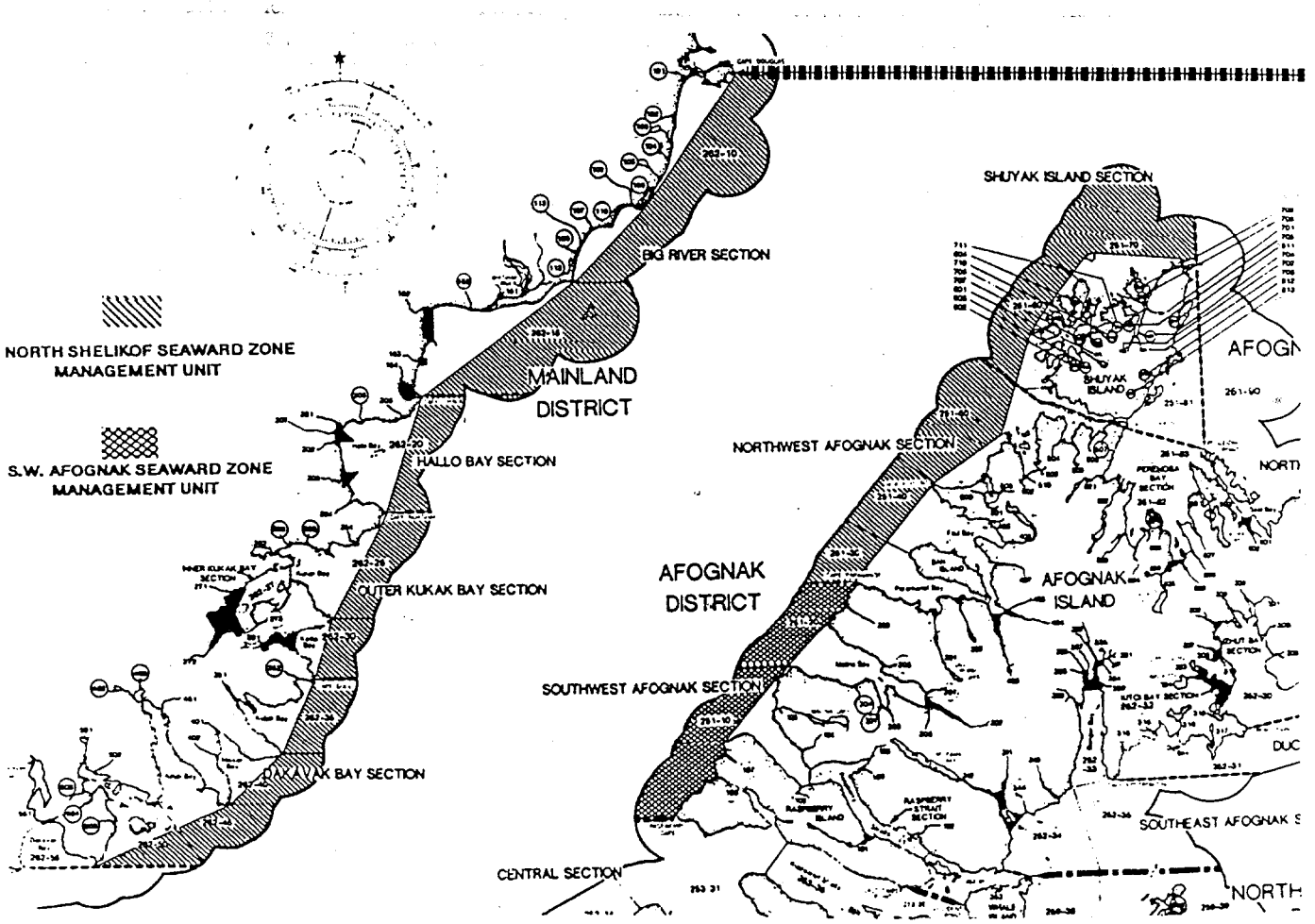
  - **management of the fishery must be based on local stocks;**

  - **the fishery may remain open during normal fishing periods until the harvest exceeds 50,000 sockeye salmon;**

- when the harvest exceeds 50,000 sockeye salmon, the department shall restrict the fishery by emergency order to waters of the Southwest Afognak Section (shoreward zones) east of a line from Cape Paramanof at 58°18'21" N. lat., 153°02'45" W. long., to Tanaak Cape at 58°15'36" N. lat., 153°06'09" W. long., to Steep Cape at 58°12'05" N. lat., 153°12'33" W. long., to a point at 5 at 58°08'25" N. lat., 153°18'52" W. long., to Raspberry Cape at 58°03'35" N. lat., 153°25'06" W., long.

All fishermen and tender operators should familiarize themselves with the boundaries of these "seaward" and "shoreward" zones in each of these eight management units. Also, it will be the responsibility of both the permit holder and the tender operator to insure that fish tickets for fish harvested in the geographical area covered by this plan properly reflect the poundage and quantities of salmon by species taken in this geographical area. If there are lingering questions on this new management plan feel free to contact ADF&G Kodiak staff.

Figure 6. KODIAK MANAGEMENT AREA
NORTH SHELIKOF STRAIT SOCKEYE SALMON MANAGEMENT PLAN[1]



[1] APPROXIMATE LOCATION OF BOUNDARY LINES IDENTIFYING THE "NORTH SHELIKOF SEAWARD ZONE MANAGEMENT UNIT" AND THE "S.W. AFOGNAK SEAWARD ZONE MANAGEMENT UNIT".

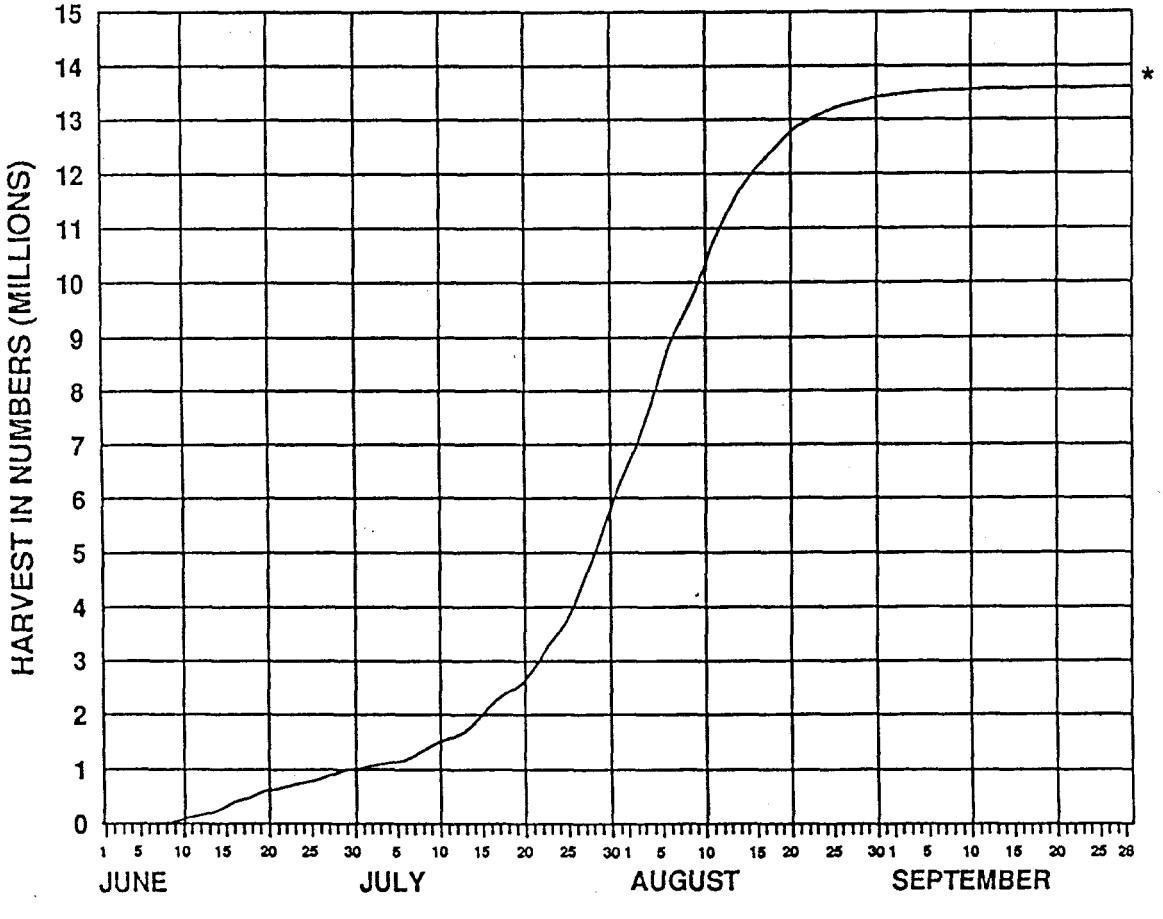
Figure 7.

THE PROJECTED 1992 SALMON HARVEST

THE FOLLOWING GRAPHS REPRESENT CUMMULATIVE HARVEST EXPECTATIONS BY SPECIFIC DATES FOR EACH OF KODIAK'S COMMERCIALLY TARGETED SALMON SPECIES AS WELL AS FOR ALL SPECIES COMBINED. THE SHAPE OF EACH CURVE IS AN HISTORICAL REPRESENTATION OF THE AVERAGE CUMULATIVE HARVEST BY DATE AND THE MAGNITUDE OF EACH CURVE IS DETERMINED BY ADF&G PRE-SEASON HARVEST PROJECTION. THESE GRAPHS CAN BE USED FOR PLANNING PURPOSES BY BOTH INDUSTRY AND ADF&G TO IDENTIFY IF PRE-SEASON OPERATIONAL OR MANAGEMENT STRATEGIES NEED TO BE MODIFIED IN-SEASON BECAUSE OF UNEXPECTED DEVIATIONS IN ACTUAL RUN STRENGTH. IN-SEASON HARVEST DATA WILL BE MADE AVAILABLE IN ORDER THAT TRENDS IN ACTUAL HARVEST CAN BE PLOTTED ON THESE GRAPHS.

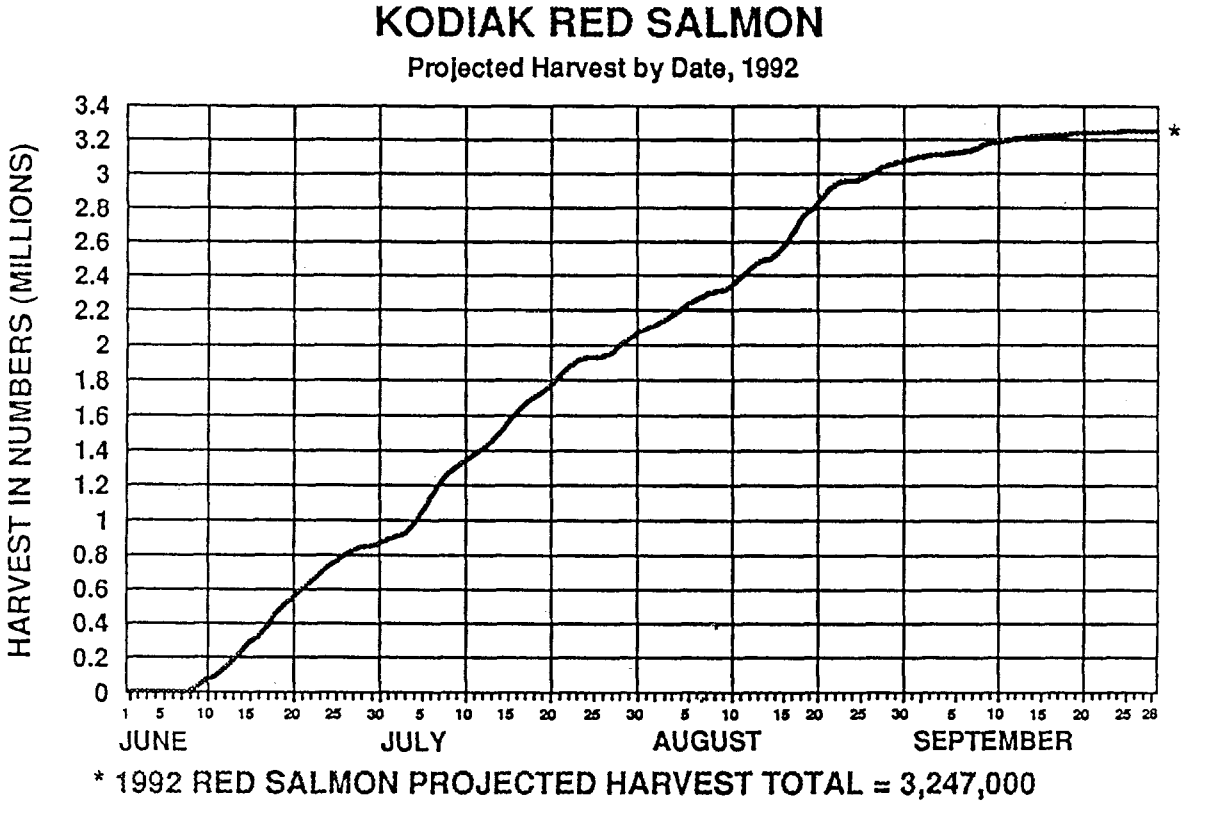
KODIAK SALMON, ALL SPECIES

Projected Harvest by Date, 1992



* 1992 ALL SALMON SPECIES PROJECTED HARVEST TOTAL = 13,587,000

Figure 8.


KODIAK RED SALMON
Projected Harvest by Date, 1992
HARVEST IN NUMBERS (MILLIONS)
3.4
3.2
3
2.8
2.6
2.4
2.2
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
*
JUNE
JULY
AUGUST
SEPTEMBER
* 1992 RED SALMON PROJECTED HARVEST TOTAL = 3,247,000

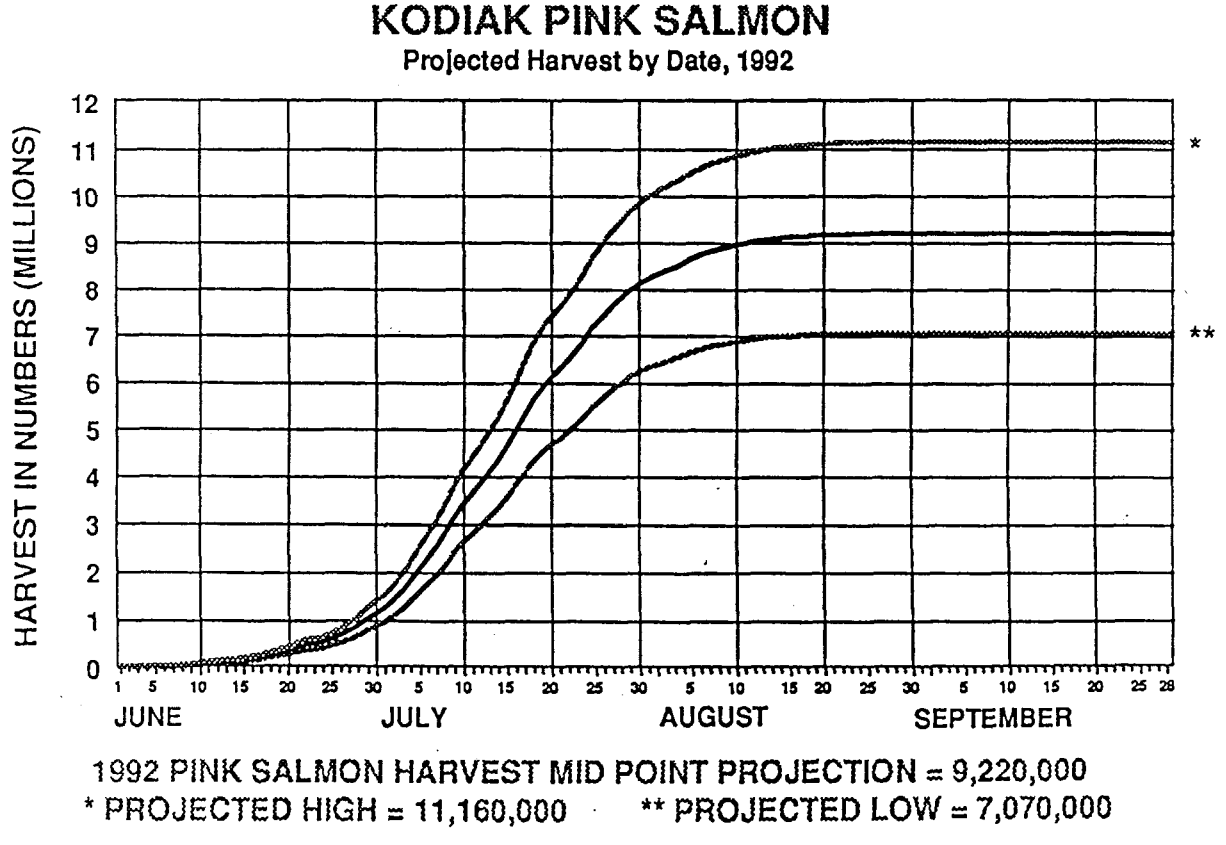
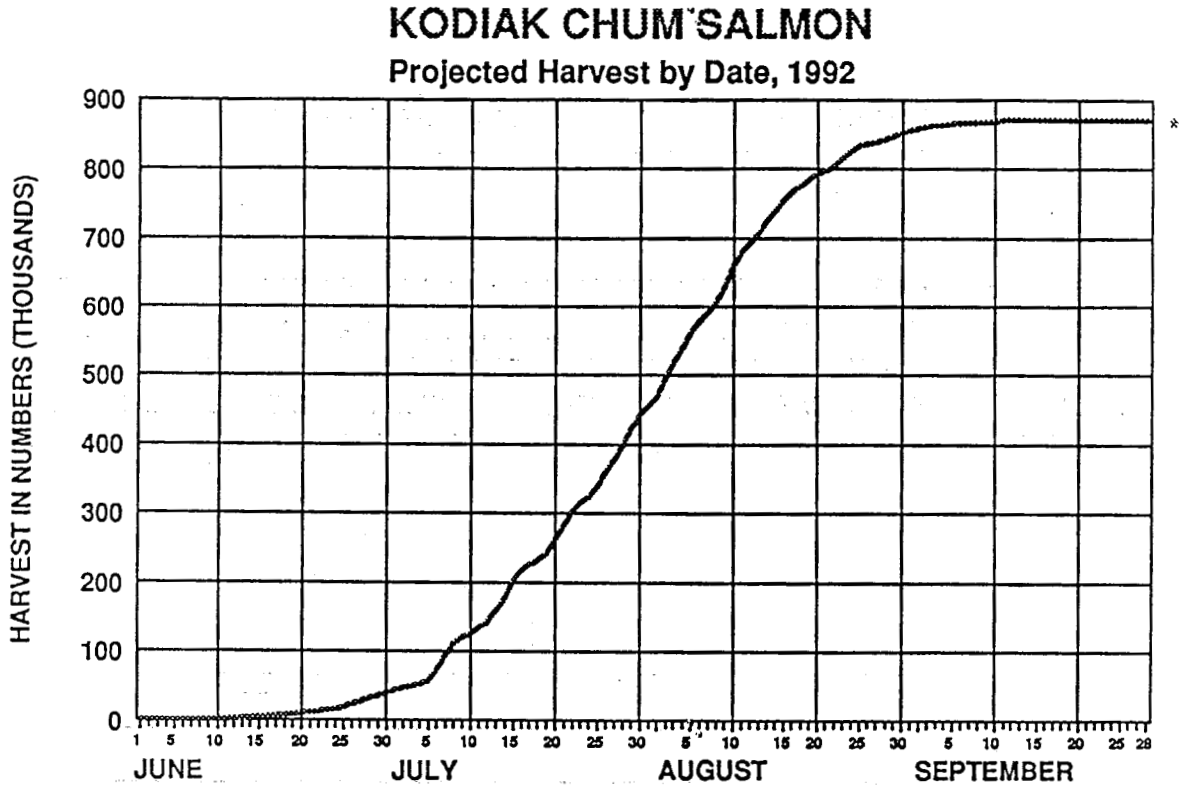
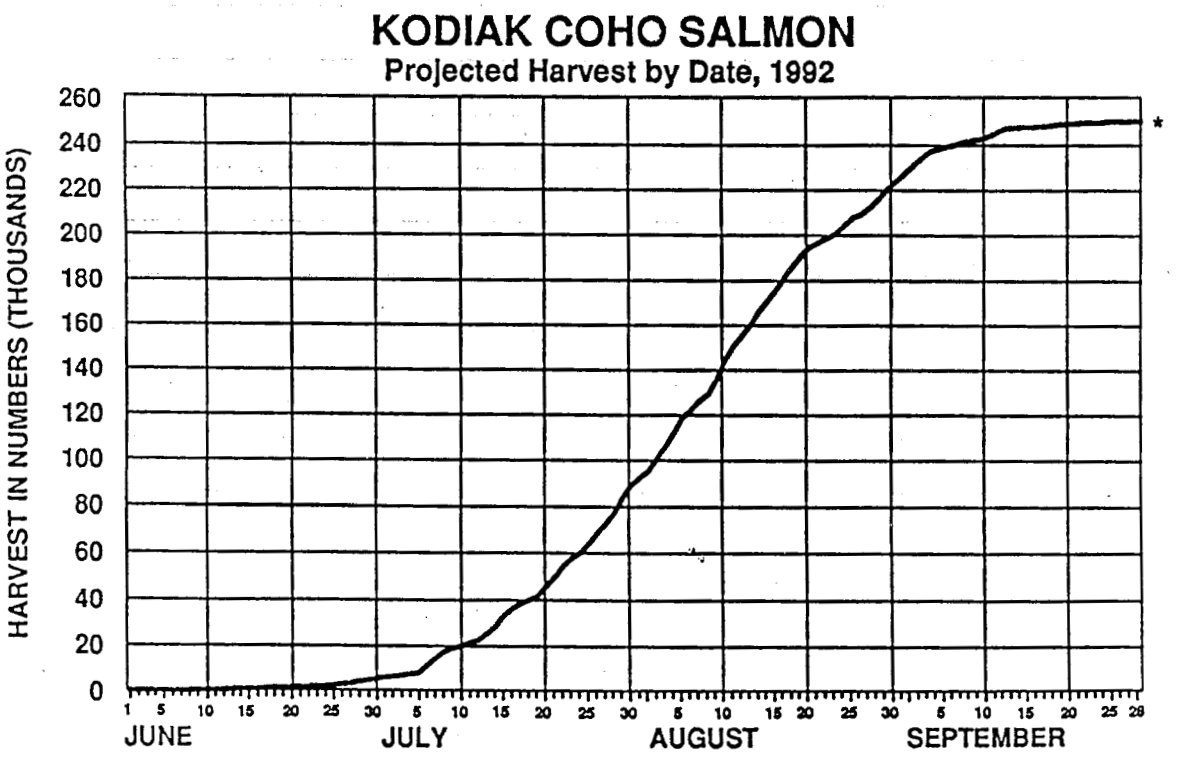

KODIAK PINK SALMON
Projected Harvest by Date, 1992
HARVEST IN NUMBERS (MILLIONS)
12
11
10
9
8
7
6
5
4
3
2
1
0
*
**
JUNE
JULY
AUGUST
SEPTEMBER
1992 PINK SALMON HARVEST MID POINT PROJECTION = 9,220,000
* PROJECTED HIGH = 11,160,000
** PROJECTED LOW = 7,070,000

Figure 9.



* 1992 CHUM SALMON PROJECTED HARVEST TOTAL = 870,000



* 1992 COHO SALMON PROJECTED HARVEST TOTAL = 250,000

SOCKEYE SALMON ESCAPEMENTS GOALS FOR AREA K
MAJOR SOCKEYE SALMON SYSTEMS

Targeted sockeye salmon fisheries on systems having fish weirs, where a total enumeration of upstream migrants can be used to determine the amount of fishing time required to harvest identified surpluses, commonly occurs for those systems listed in the table below. For sockeye salmon systems without weirs, fishing time is generally conservative and occurs at the discretion of ADF&G's perception of system-specific return strength.

The table below identifies minimum and desired escapement requirements for each system's sockeye salmon stocks. A basic management function is to achieve minimum escapements for stocks exploited by targeted fisheries, even if it requires that directed fishing time on those stocks does not occur. Likewise, when the possibilities exist that desired escapements will be exceeded and significant deviations from optimum production could occur because of that excess, maximum directed fishing time on pertinent stocks is allowed, even if it requires providing for continuous stream terminus fishing opportunities to contain the escapement at or near desired levels. These are the extreme management scenarios occasionally needed for Kodiak's sockeye salmon management. More commonly only a moderate amount of directed fishing time is required to harvest sockeye salmon surpluses and to provide escapement which approaches desired levels.

Table 3. SOCKEYE SALMON ESCAPEMENT GOALS FOR SEVERAL MAJOR AND MINOR SOCKEYE SYSTEMS[1] (Millions of Fish)

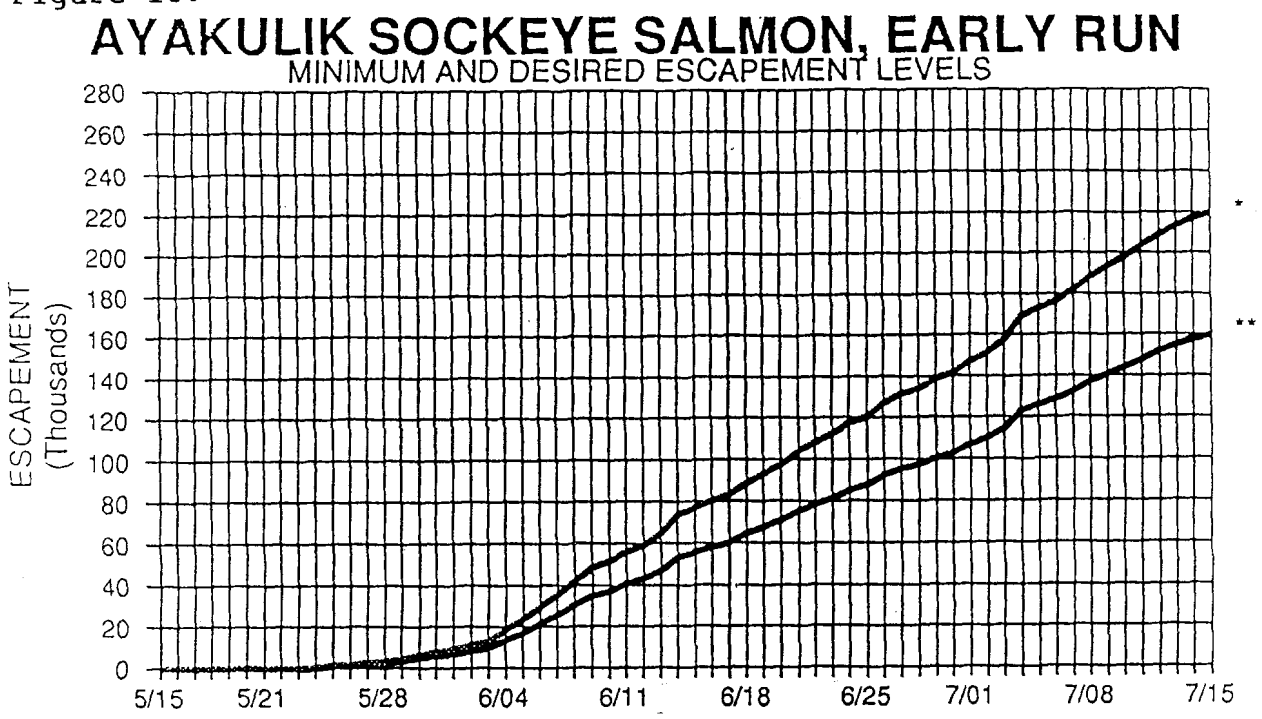
	Early (Before 7/15)		Late (After 7/15)		Total	
	Min.	Des.	Min.	Des.	Min.	Des.
Major Systems						
Karluk[2]	.150	.250	.400	.550	.550	.800
Ayakulik	.160	.220	.040	.080	.200	.300
Upper Station[2]	.050	.075	.150	.200	.200	.275
Fraser[3]	.140	.200	-	-	.140	.200
Subtotal	**.500**	**.745**	**.590**	**.830**	**1.090**	**1.575**
Minor Systems						
Akalura[2]	.010	.015	.030	.045	.040	.060
Saltery[3]	.020	.040	-	-	.020	.030
Buskin[3]	.010	.015	-	-	.010	.015
Litnik[3]	.040	.060	-	-	.040	.060
Pauls[3]	.020	.040	-	-	.020	.040
Thorsheim[3]	.005	.010	-	-	.005	.010
Subtotal	**.015**	**.180**	**.030**	**.045**	**.120**	**.205**
GRAND TOTAL	.605	.925	.620	.875	1.225	1.790

1 This listing of systems identifies only those systems whose escapement is monitored by fish weir total escapement counts. The escapement into these systems represents approximately 85% of the Kodiak Area's total sockeye escapement.

2 Sockeye escapement into these systems characterized by two (2) more or less distinct stocks as identified by bimodal escapement pattern, i.e. an early-stock where the cumulative escapement occurs through July 15 and a late stock where the cumulative escapement occurs primarily from July 16 through season's end.

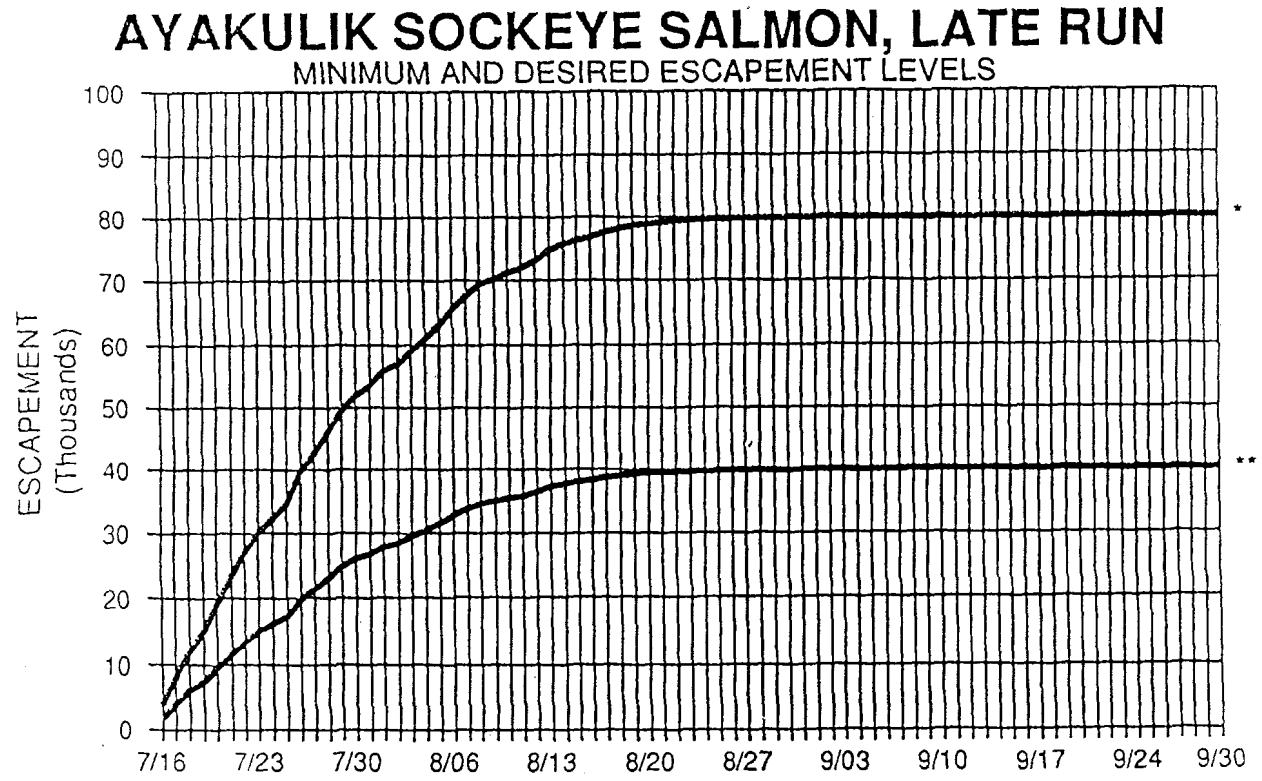
3 Sockeye escapement into these systems characterized by one (1) distinct escapement pattern and where escapement is essentially completed by approximately July 25.

Figure 10.



* - DESIRED ESCAPEMENT = 220,000 SOCKEYE

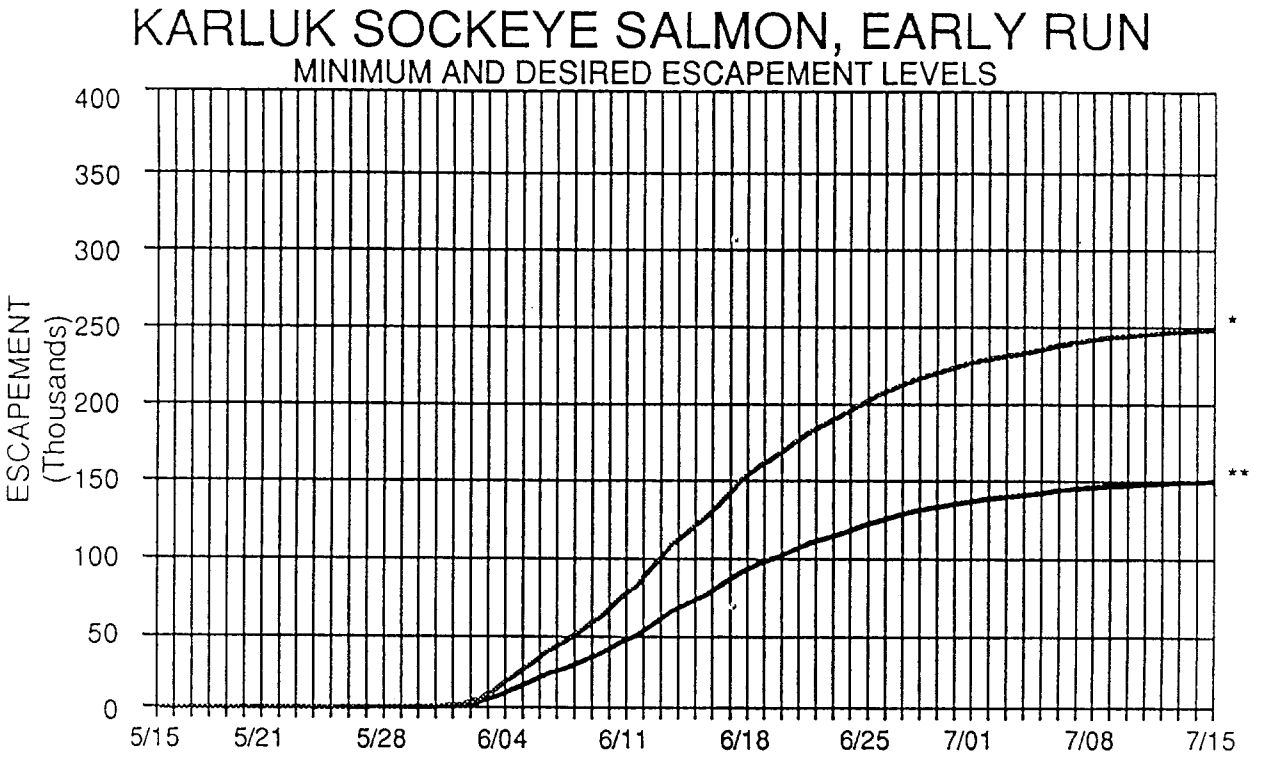
** - MINIMUM ESCAPEMENT = 160,000 SOCKEYE



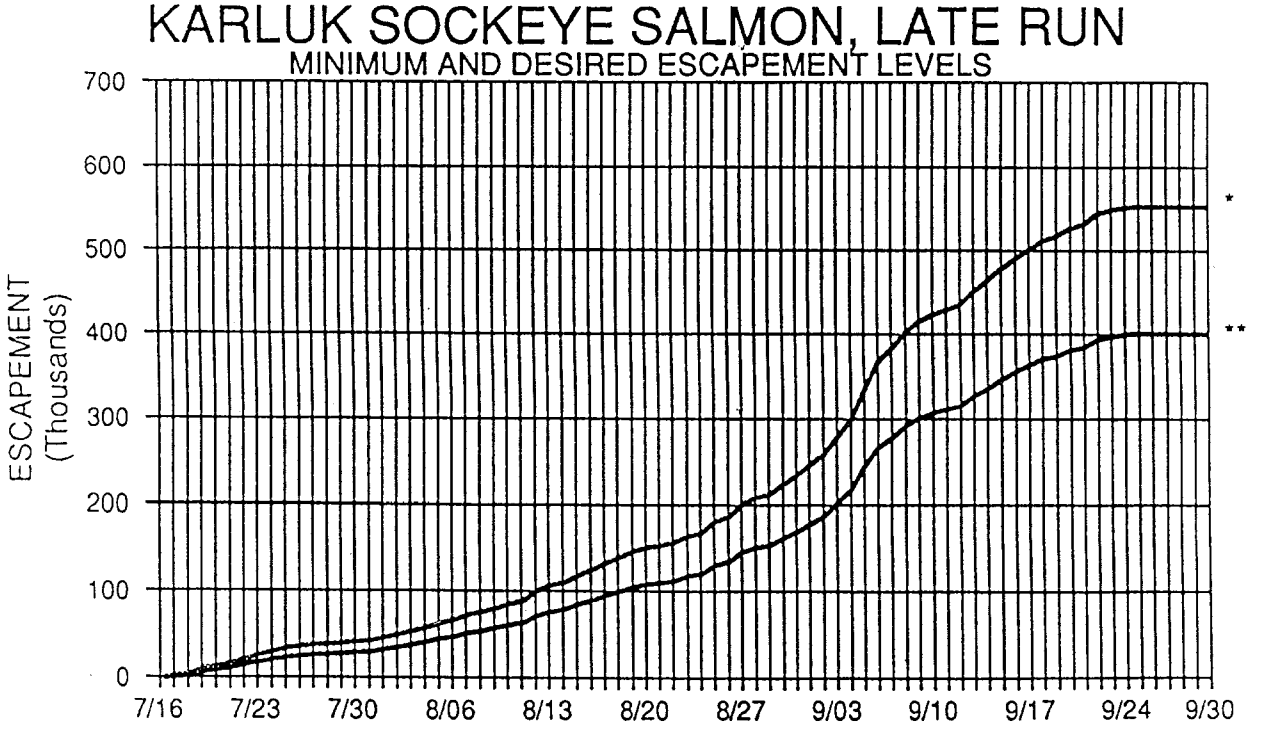
* - DESIRED ESCAPEMENT = 80,000 SOCKEYE

** - MINIMUM ESCAPEMENT = 40,000 SOCKEYE

Figure 11.



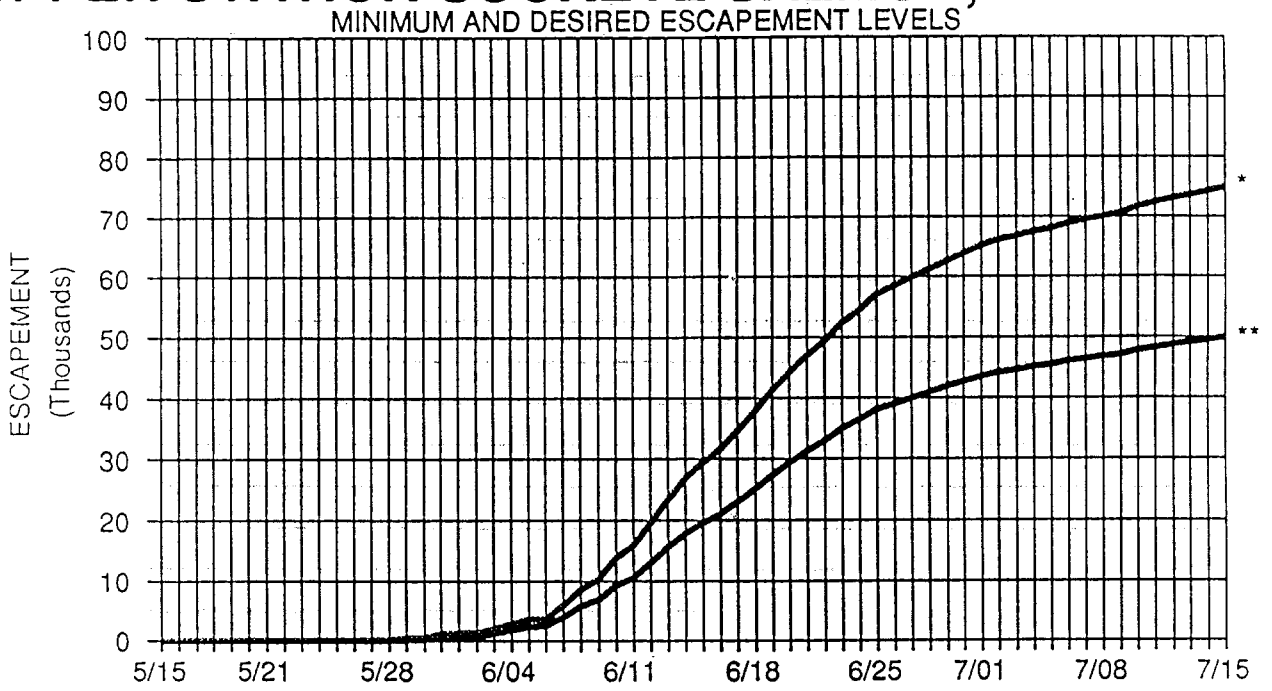
* - DESIRED ESCAPEMENT = 250,000 SOCKEYE
** - MINIMUM ESCAPEMENT = 150,000 SOCKEYE



* - DESIRED ESCAPEMENT = 550,000 SOCKEYE
** - MINIMUM ESCAPEMENT = 400,000 SOCKEYE

Figure 12.

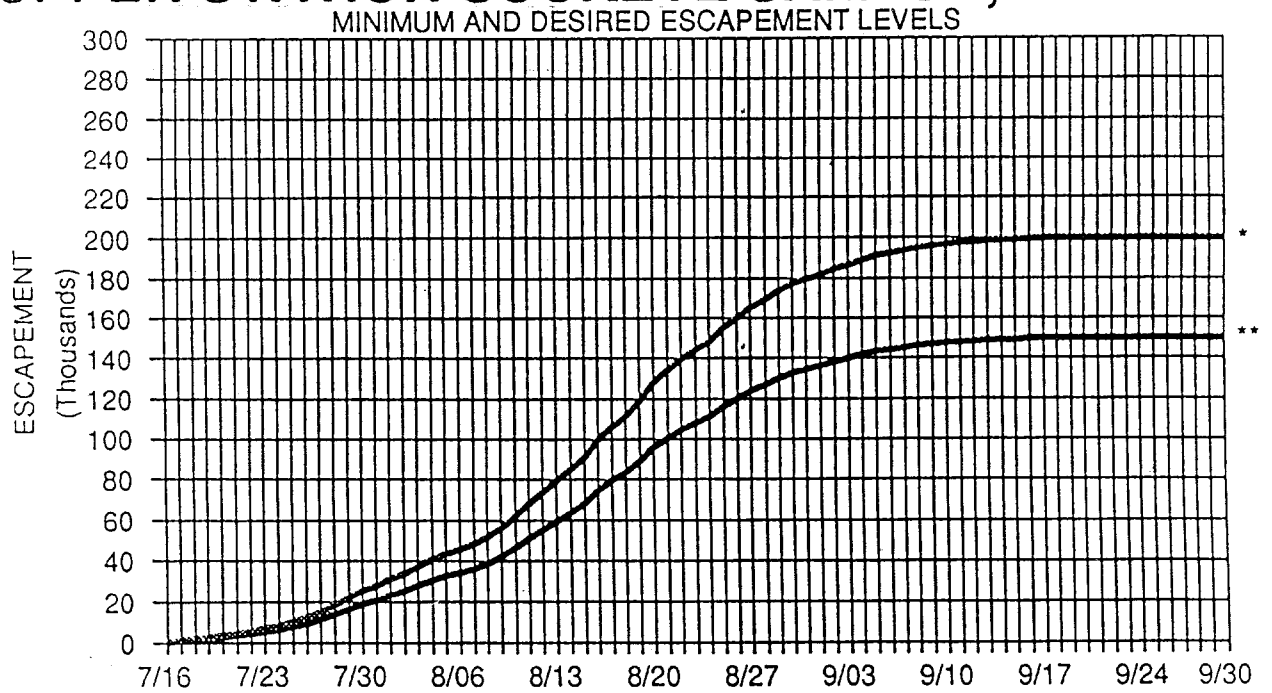
UPPER STATION SOCKEYE SALMON, EARLY RUN



* - DESIRED ESCAPEMENT = 75,000 SOCKEYE

** - MINIMUM ESCAPEMENT = 50,000 SOCKEYE

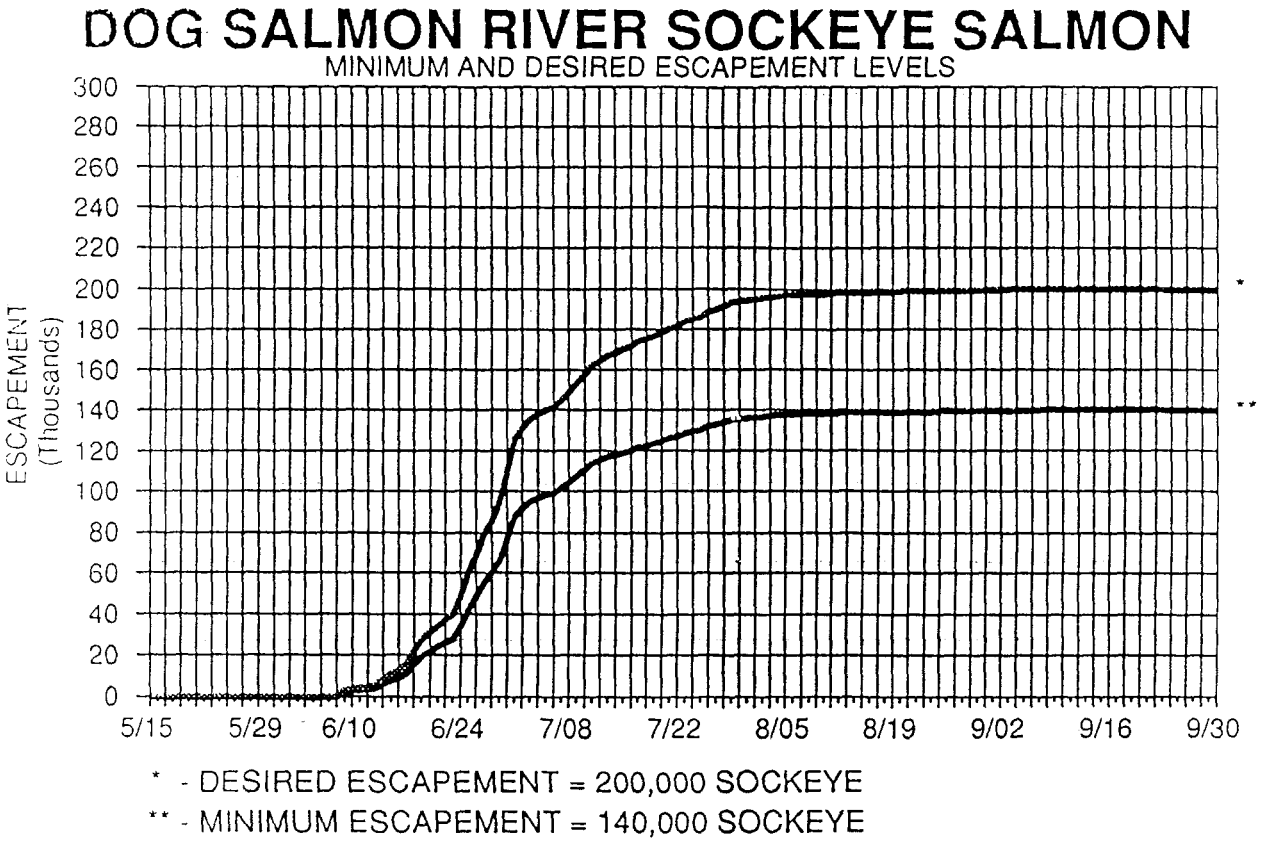
UPPER STATION SOCKEYE SALMON, LATE RUN



* - DESIRED ESCAPEMENT = 200,000 SOCKEYE

** - MINIMUM ESCAPEMENT = 150,000 SOCKEYE

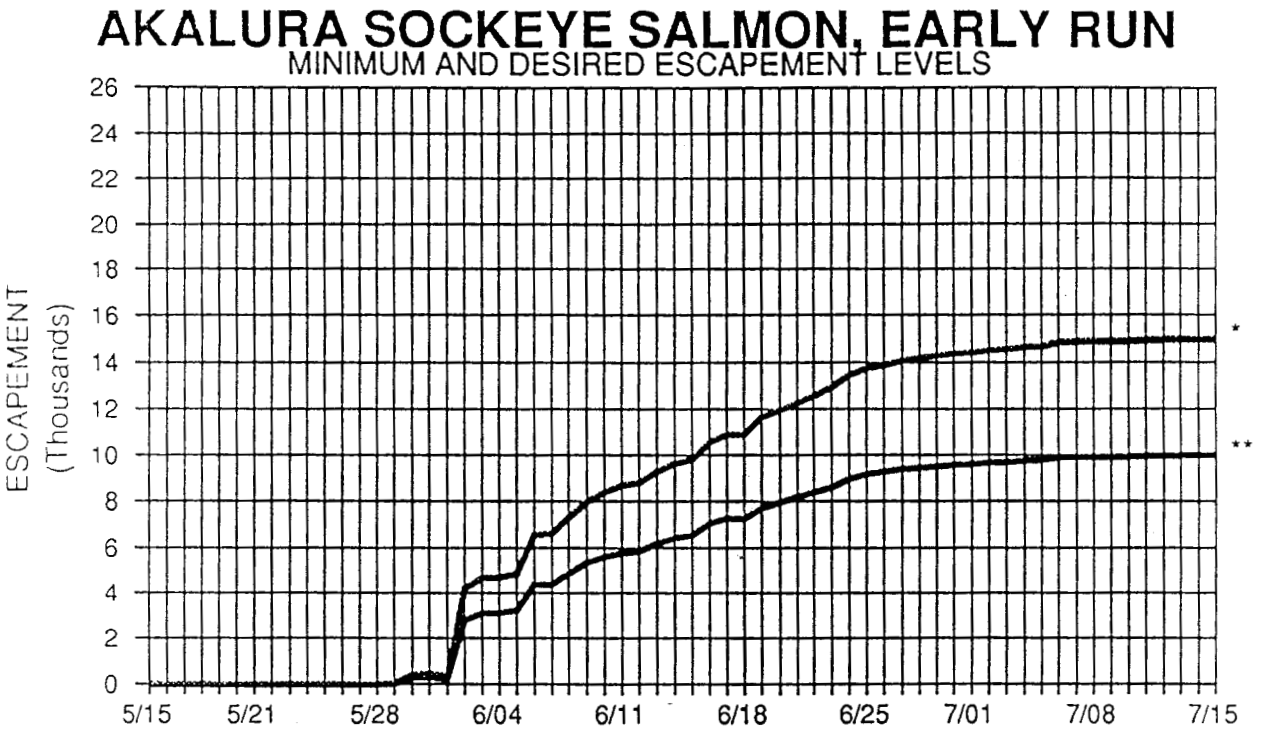
Figure 13.



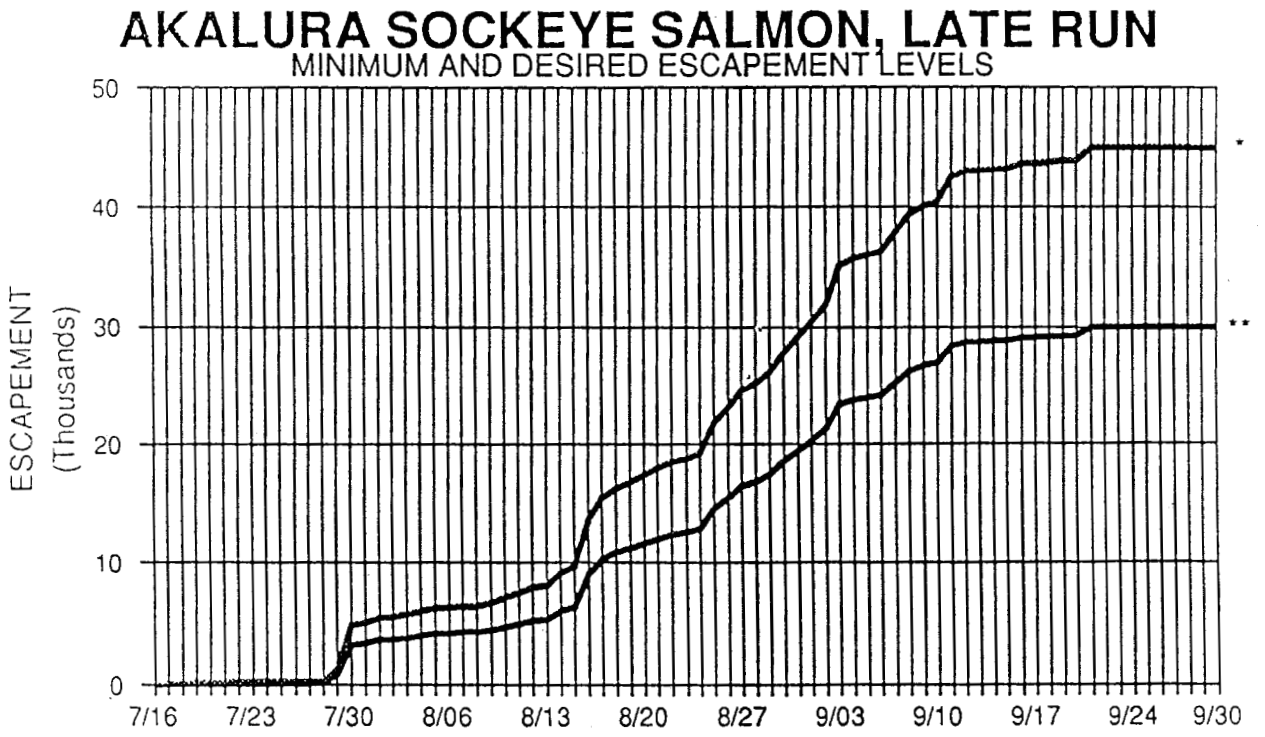
* - DESIRED ESCAPEMENT = 200,000 SOCKEYE

** - MINIMUM ESCAPEMENT = 140,000 SOCKEYE

Figure 14.

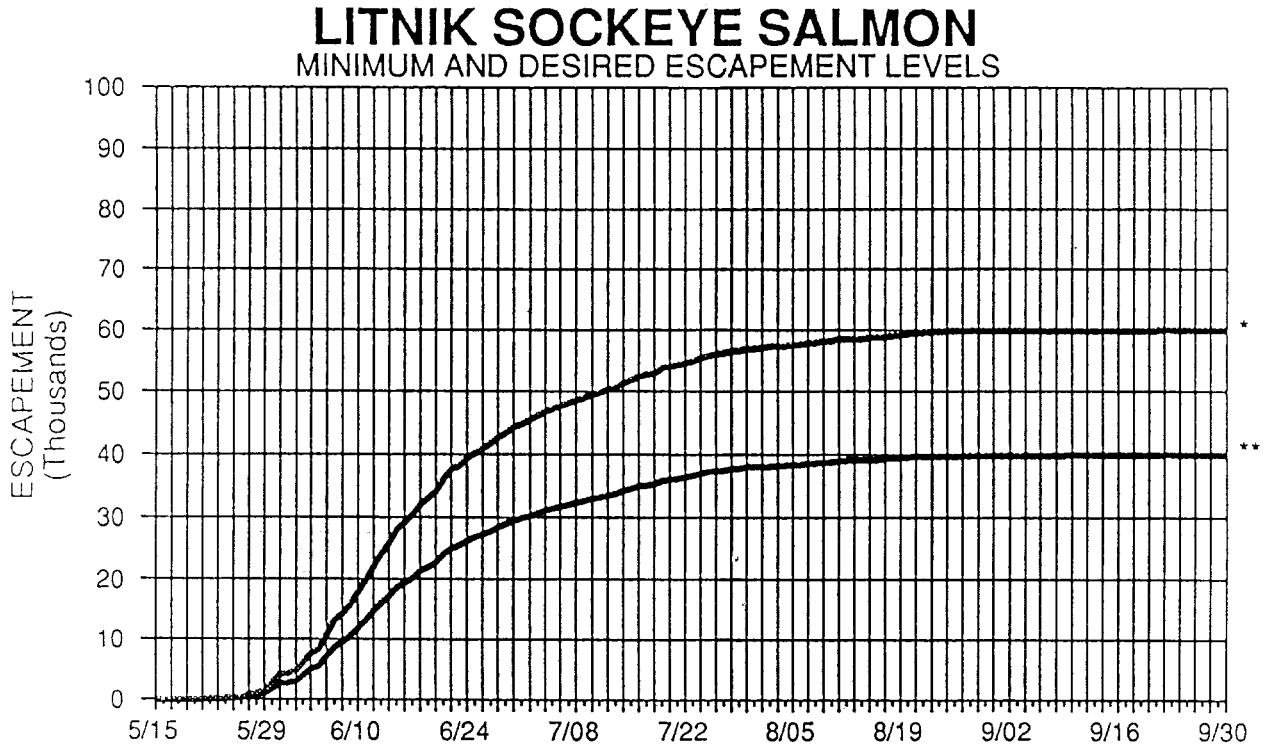


* - DESIRED ESCAPEMENT = 15,000 SOCKEYE
** - MINIMUM ESCAPEMENT = 10,000 SOCKEYE



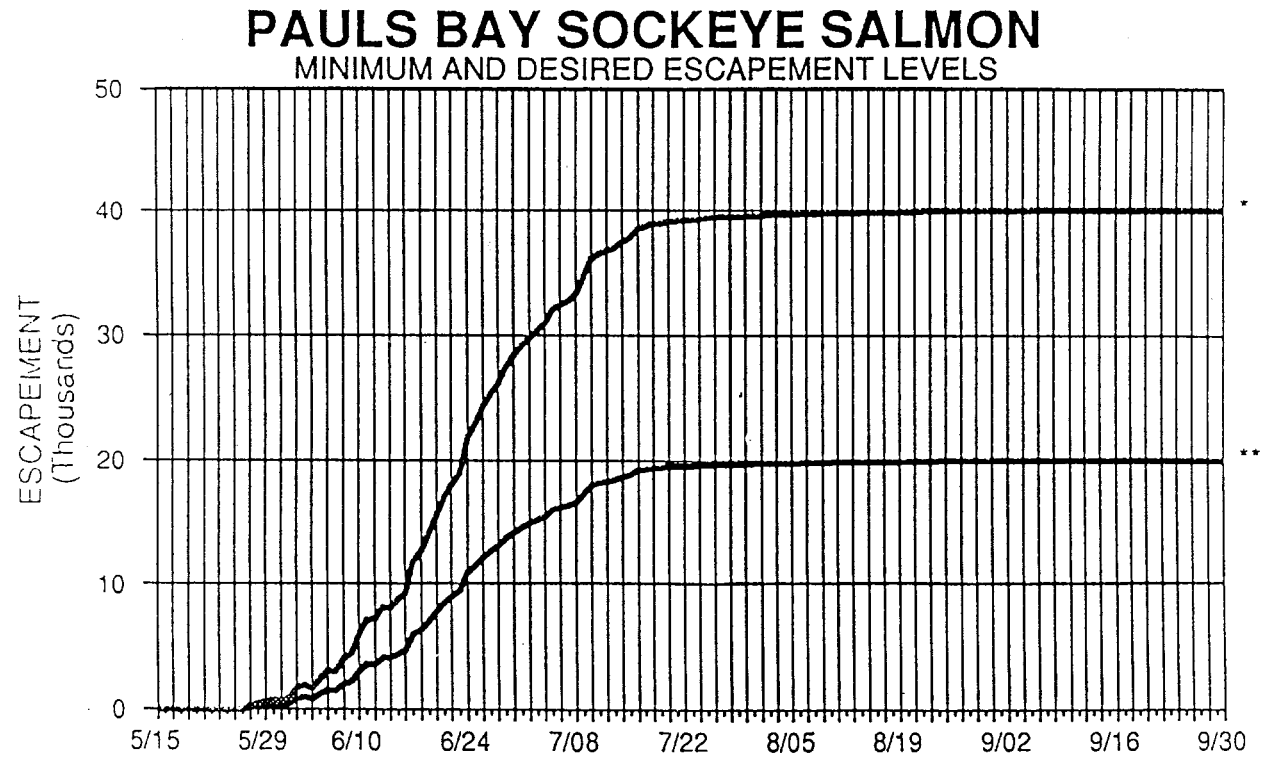
* - DESIRED ESCAPEMENT = 45,000 SOCKEYE
** - MINIMUM ESCAPEMENT = 30,000 SOCKEYE

Figure 15.



* - DESIRED ESCAPEMENT = 60,000 SOCKEYE

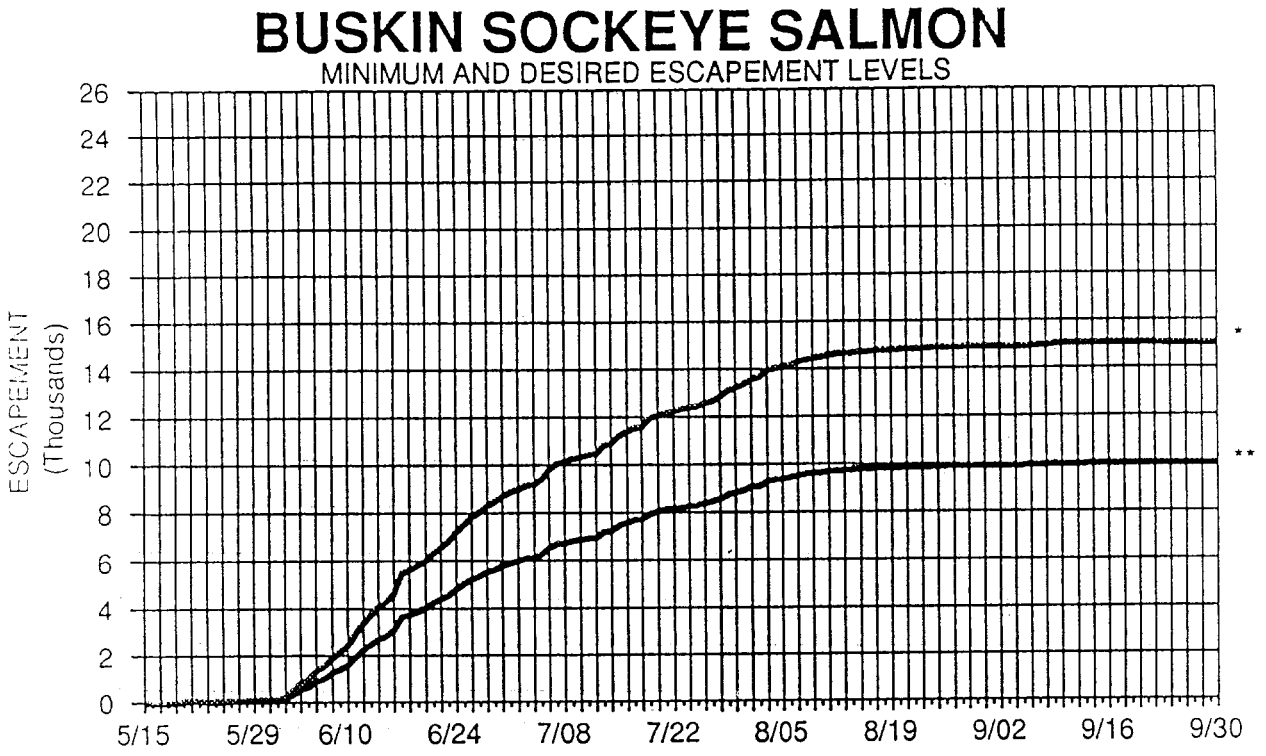
** - MINIMUM ESCAPEMENT = 40,000 SOCKEYE



* - DESIRED ESCAPEMENT = 40,000 SOCKEYE

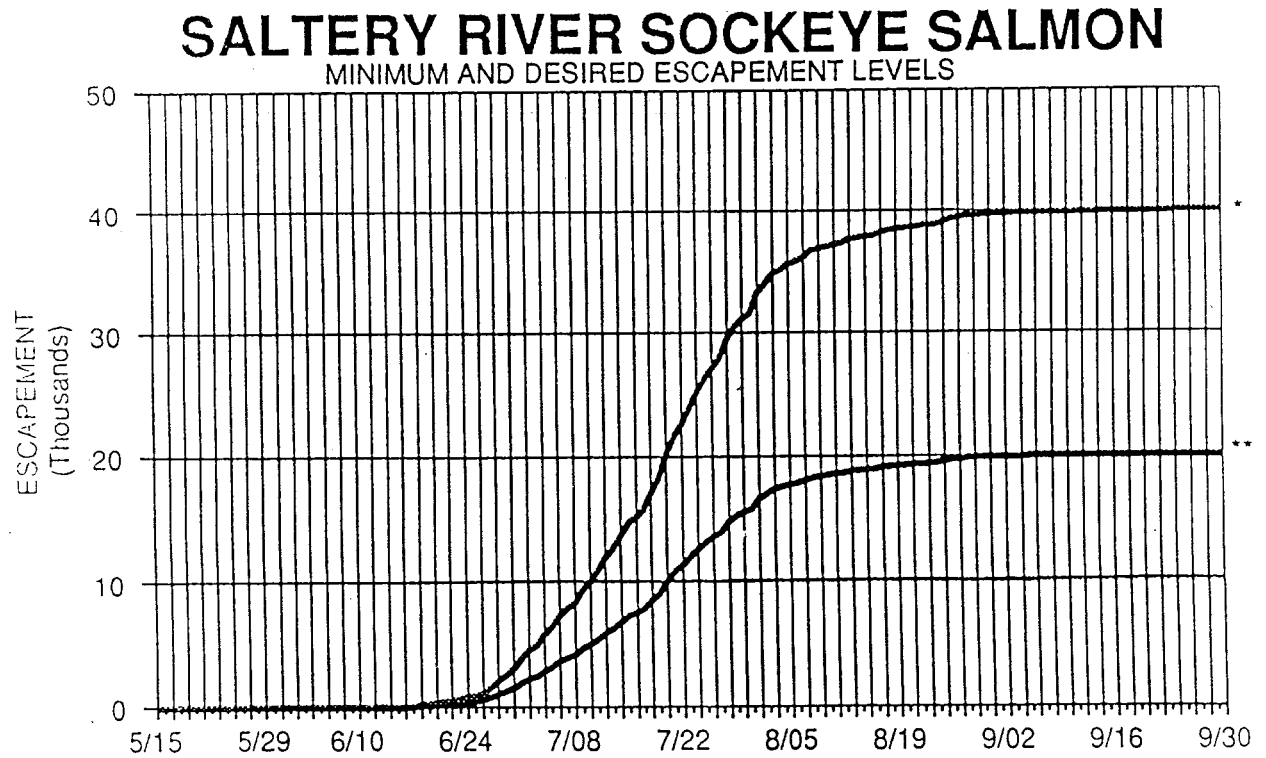
** - MINIMUM ESCAPEMENT = 20,000 SOCKEYE

Figure 16.



* - DESIRED ESCAPEMENT = 15,000 SOCKEYE

** - MINIMUM ESCAPEMENT = 10,000 SOCKEYE



* - DESIRED ESCAPEMENT = 40,000 SOCKEYE

** - MINIMUM ESCAPEMENT = 20,000 SOCKEYE

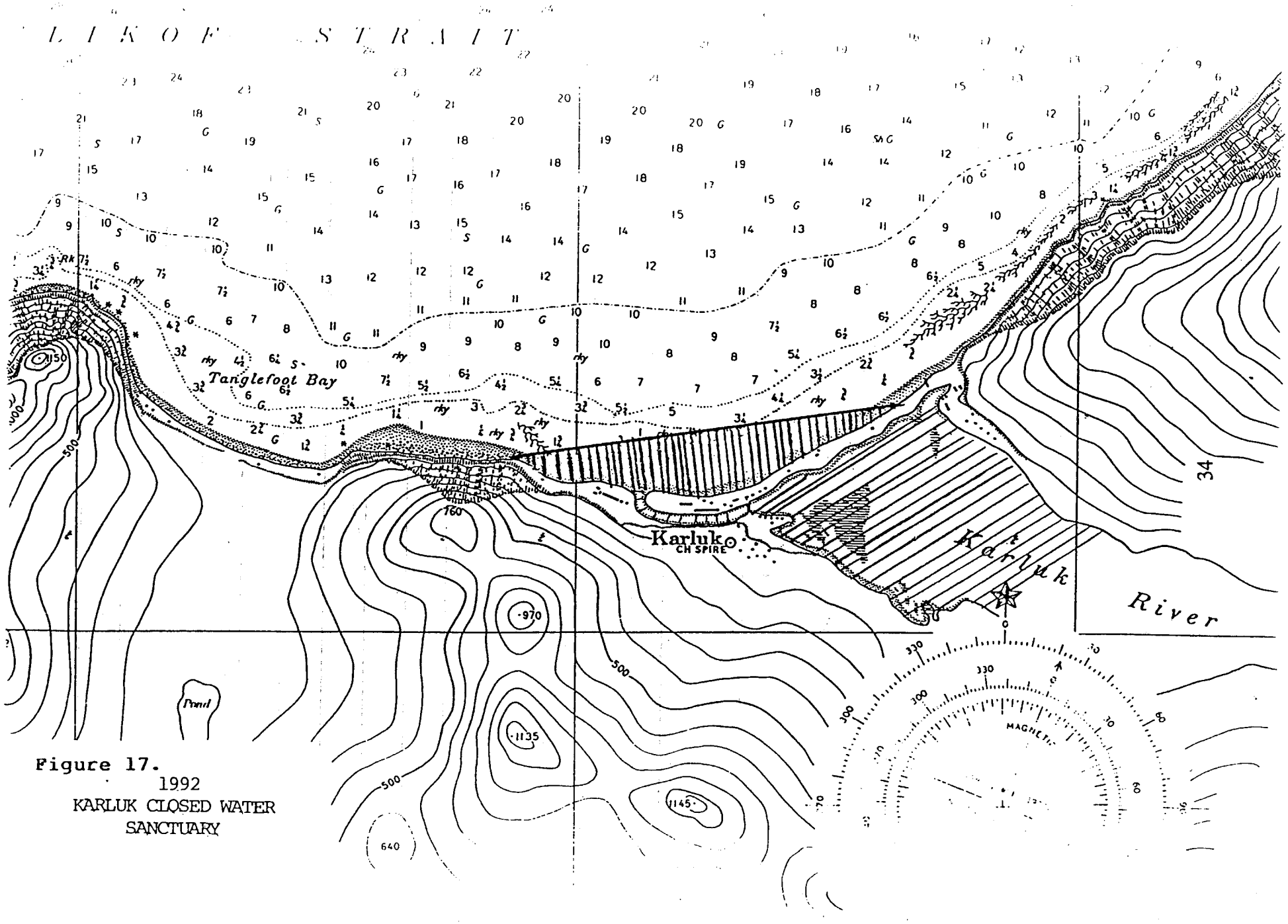


Figure 17.
1992
KARLUK CLOSED WATER
SANCTUARY

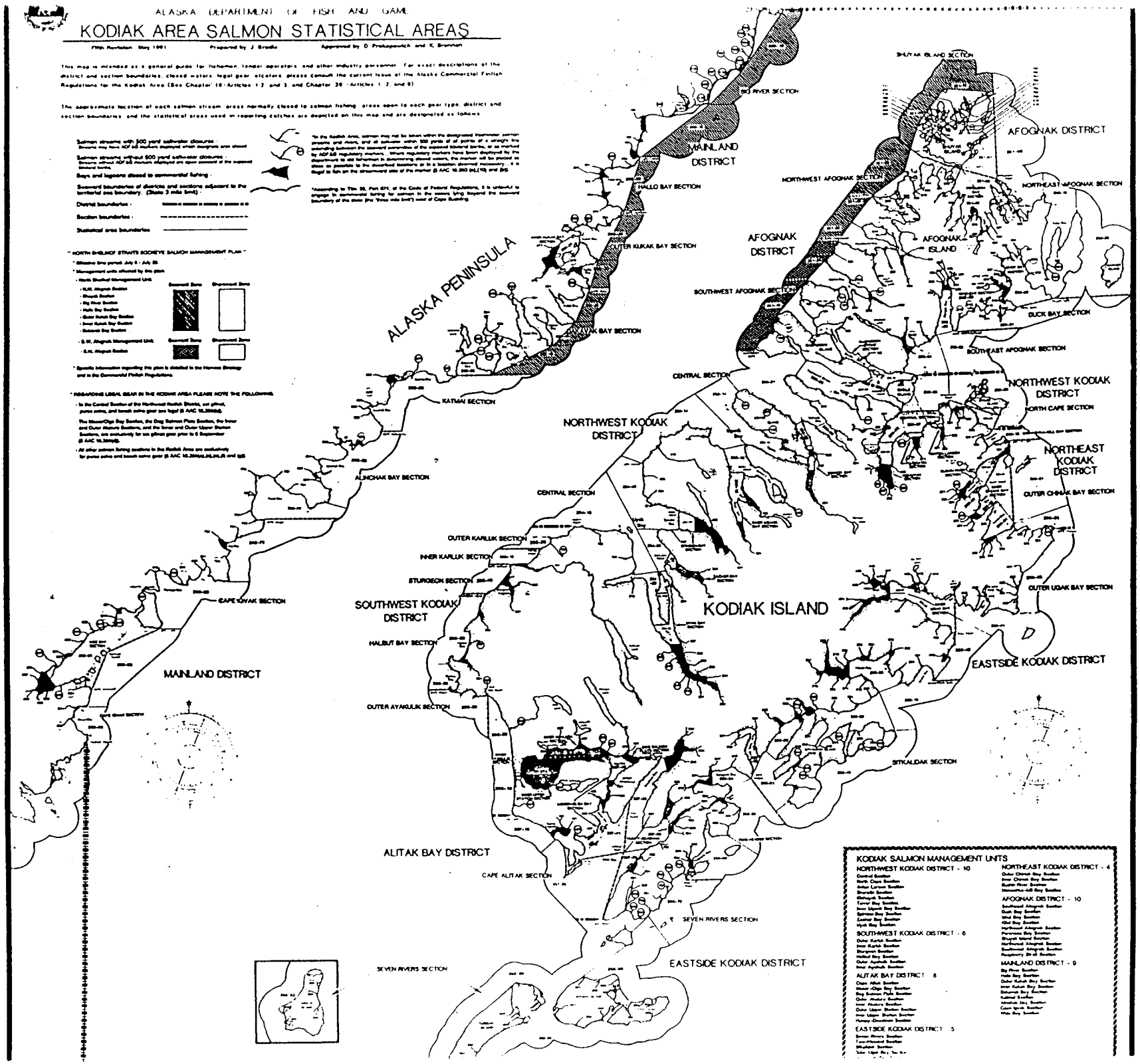


Figure 18. Chart of districts and sections.